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March 3 1849

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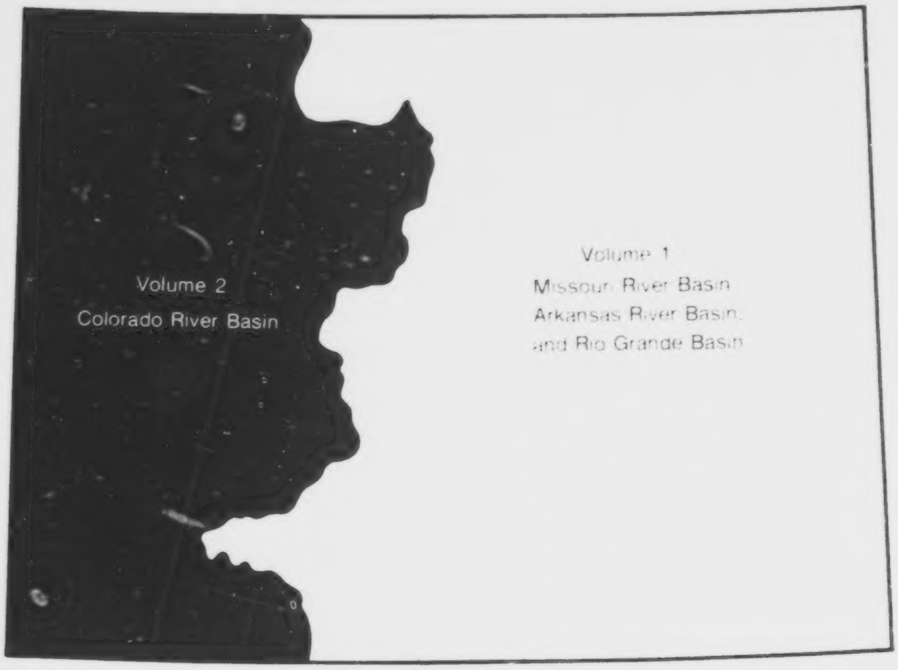
Water Resources Data Colorado

Water Year 1989

Volume 2. Colorado River Basin


Volume 2
Colorado River Basin
Volume 1
Missouri River Basin
Arkansas River Basin,
and Rio Grande Basin

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CO-89-2
Prepared in cooperation with the State of Colorado
and with other agencies

CALENDAR FOR WATER YEAR 1989

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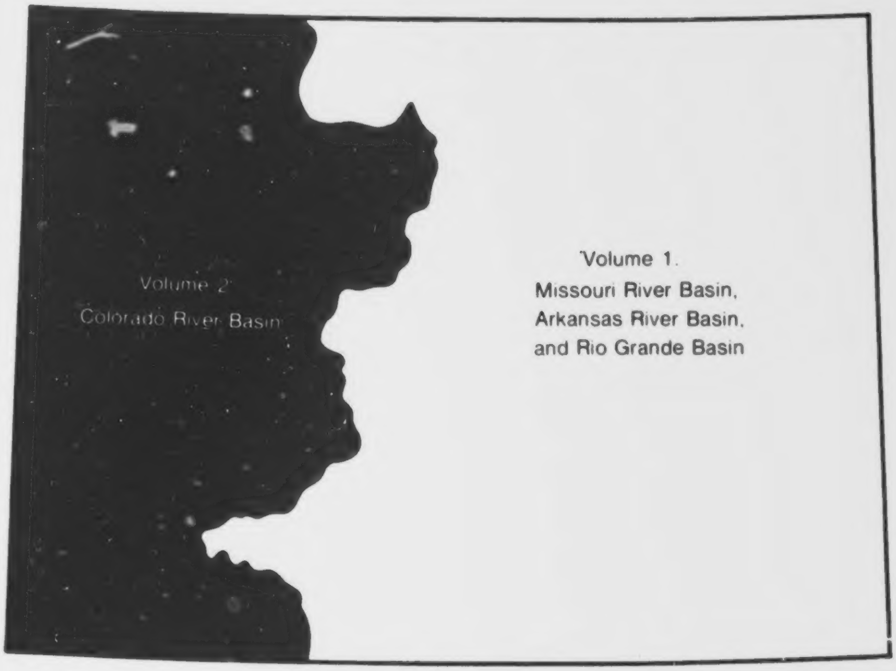
Water Resources Data Colorado
Water Year 1989

Volume 2. Colorado River Basin

by R.C. Ugland, B.J. Cochran, R.G. Kretschman, E.A. Wilson, and J.D. Bennett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UNITED STATES DEPARTMENT OF THE INTERIOR
MANUEL LUJAN, JR., Secretary

GEOLOGICAL SURVEY
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1990

PREFACE

This volume of the annual hydrologic data report of Colorado is one of a series of annual reports that document hydrologic data gathered from the U. S. Geological Survey's surface- and ground-water data-collection networks in each state, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for Colorado are contained in two volumes:

Volume 1. Missouri River, Arkansas River, and Rio Grande
basins in Colorado,
Volume 2. Colorado River basin.

This report is the culmination of a concerted effort by dedicated personnel of the U. S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

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Water-resources data for Colorado for the 1989 water year consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of wells and springs. This report (Volumes 1 and 2) contains discharge records for 321 gaging stations, stage and contents of 26 lakes and reservoirs, 1 partial-record low-flow station, peak flow information for 42 crest-stage partial record stations, and 1 miscellaneous site; water quality for 100 gaging stations, 162 miscellaneous sites; and for 21 observation wells. Five pertinent stations in bordering states also are included in this report. The records were collected and computed by the Water Resources Division of the U.S. Geological Survey under the direction of C.A. Pascale, District Chief. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies.

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(Letter after station name designates type and frequency of published data.
Daily tables: (D) discharge, (C) specific conductance, (S) sediment,
(T) temperature, (e) elevation or contents, (O) dissolved oxygen, (P) pH.

Partial tables: (c) chemical, (b) biological, (m) microbiological,
(s) sediment, (t) temperature)

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WATER RESOURCES DATA - COLORADO, 1989

VOLUME 2: COLORADO RIVER BASIN

By R. C. Ugland, B. J. Cochran, R. G. Kretschman, E. A. Wilson, and J. D. Bennett

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INTRODUCTION

The Water-Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources of Colorado each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in the report series entitled "Water Resources Data - Colorado".

This report (Volume 2 of two volumes) includes records of surface water in the State, west of the Continental Divide. Specifically, it contains: (1) discharge records for 182 streamflow-gaging stations, for 5 partial-record streamflow stations and 1 miscellaneous streamflow site; (2) stage and contents for 12 lakes and reservoirs; and (3) water-quality data for 52 streamflow-gaging stations, miscellaneous water-quality data for 119 gaged sites and 7 groundwater wells, and meteorological data for 1 site. Locations of lake and streamflow-gaging stations and water-quality stations are shown in figure 1, locations of crest-stage partial-record stations are shown in figure 2. Four pertinent stations in bordering States also are included in this report. The data in this report represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Colorado.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Colorado were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-water Supply of the United States," Parts 6B, 7, and 8. For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States." Data on ground-water levels for the 1935 through 1955 water years were published annually under the title "Water Levels and Artesian Pressures in Observation Wells in the United States." For the 1956 through 1974 water years the data were published in four 5-year reports under the title "Ground-Water Levels in the United States." Water-supply papers may be purchased from the, U.S. Geological Survey, Books and Open-File Reports, Federal Center, Building 41, Box 25425, Denver, CO 80225.

For water years 1961 through 1970, streamflow data were released by the Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1970 were similarly released either in separate reports or in conjunction with streamflow records.

Beginning with the 1971 water year, water data on streamflow, water quality, and ground-water are published in official Survey reports on a State-boundary basis. These official Survey reports carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report CO-89-2." These water-data reports are for sale, in paper copy or in micro-fiche, by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (303) 236-4882.

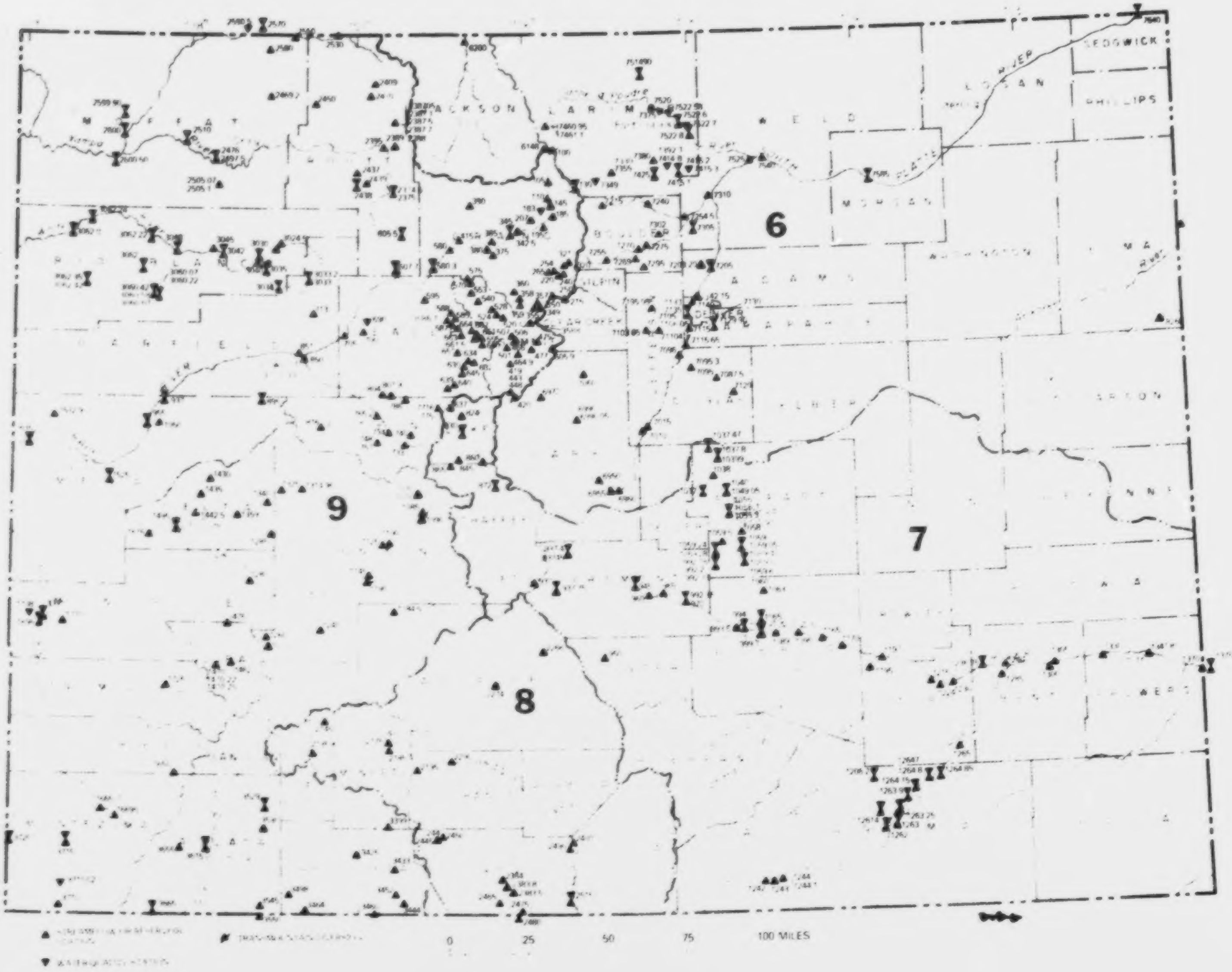
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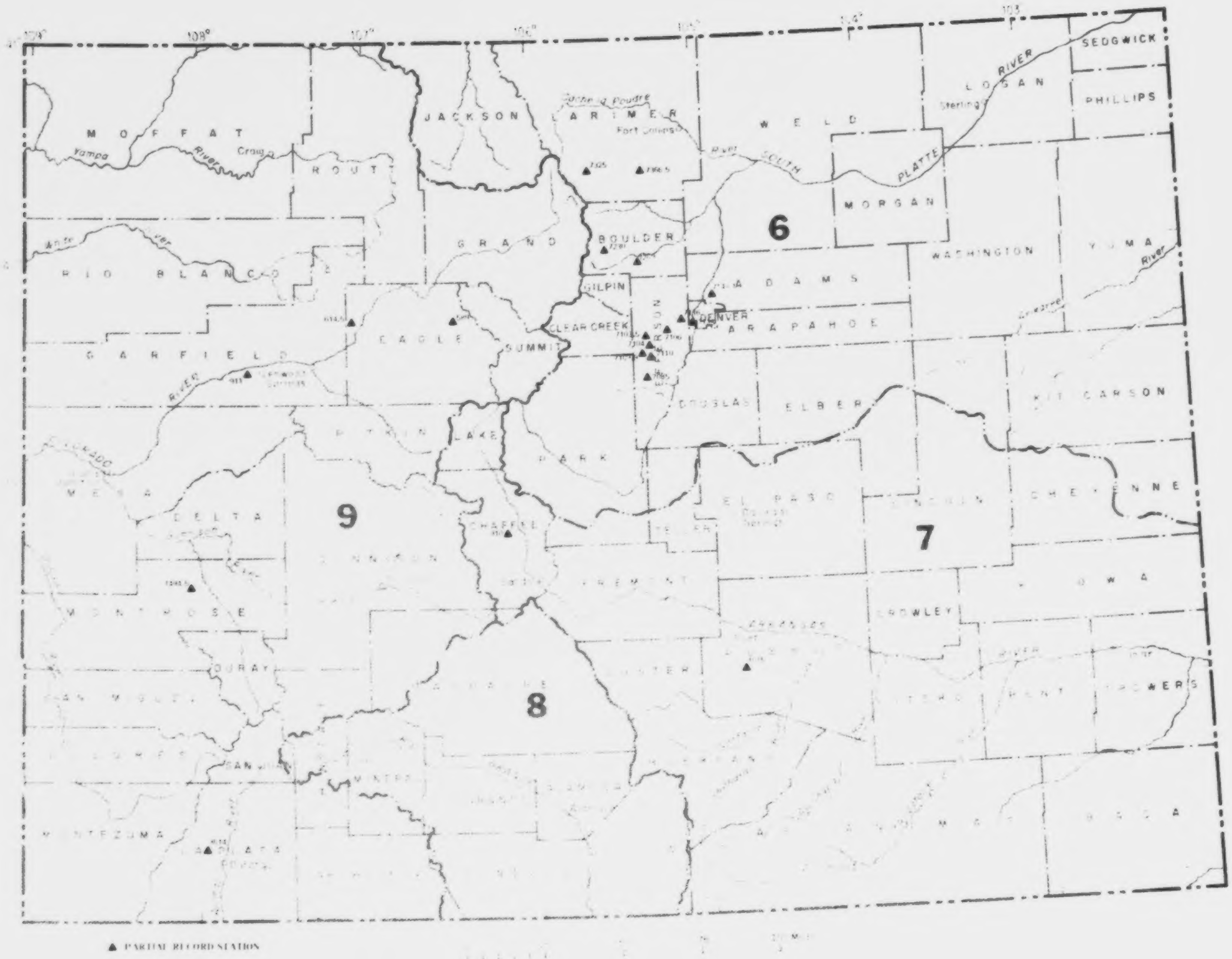
Figure 1.--Map showing locations of lakes and stream-gaging stations and water quality stations in Colorado.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SOUTH
PLATTE
RIVER
White
River
COLORADO
RIVER
Glenwood Springs
Colorado Springs
ARKANSAS
RIVER
Pueblo
Durango
▲ PARTIAL RECORD STATION

Figure 2.--Map showing locations of crest-stage partial-record stations in Colorado.

COOPERATION

The U.S. Geological Survey and organizations of the State of Colorado have had cooperative agreements for the systematic collection of surface-water records since 1895 and for water-quality records since 1941. Organizations that assisted in collecting data for this report through cooperative agreement with the Survey are:

Arkansas River Compact Administration, Jim Rodger, Secretary/Treasurer.
Bent County Commissioners, Thomas Pointon, Chairman.
Boulder County Public Works Department, Tim Feehan, Systems Analyst.
Castle Pines Metro District, Paul Dannels.
Castle Pines Northern Metro District, Paul Dannels.
Centennial Water and Sanitation District, Rick McCloud.
Cherokee Water and Sanitation District, F. S. Loosley, Manager.
City and County of Denver, Board of Water Commissioners, Monte Pascoe, President.
City of Arvada, Sterling E. Shultz.
City of Aspen, James Markalunas, City Manager.
City of Aurora, Thomas Griswold, Director of Utilities.
City of Boulder, Delanni Wheeler, City Manager.
City of Colorado Springs, Jim Ringe.
City of Englewood, Stewart Fonda, Director, Wastewater Treatment Plant.
City of Fort Collins, G. Keith Elmund, Civil Engineer II.
City of Glendale, Robert Taylor.
City of Glenwood Springs, Kevin Kadlec,City Manager.
City of Golden, Dan Hartman, Director of Public Works.
City of Longmont, Randy Earley.
City of Loveland, Richard Leffier.
City of Northglenn, Kip Scott.
City of Steamboat Springs, J. Zimmerman.
City of Thornton, Ron Lovan, Assistant Utilities Director.
City of Westminster, Dan Strietelmeier.
Colorado Department of Health, Brad Beckham, Executive Director.
Colorado Division of Mined Land Reclamation, James Pendelton, Director.
Colorado Division of Water Resources, J. A. Danielson, State Engineer.
Colorado River Water Conservation District, David Merritt, Secretary-Engineer.
Colorado Springs Department of Public Utilities, J. D. Phillips, Director.
Delta County Board of County Commissioners, David R. Erickson, Administrator.
Denver Regional Council of Governments, Robert L. Tonsing, Chairman.
Eagle County Board of Commissioners, James Fritze, County Manager.
Evergreen Metropolitan District, G. C. Schulte, General Manager.
Fountain Valley Authority, Edward Bailey.
Garfield County, Mark Bean, Director of Administrative Services.
Jefferson County Board of County Commissioners, Paul E. Hargrave, Director.
Lower Fountain Water-Quality Management Association, Stuart Loosely, President.
Metropolitan Denver Sewage Disposal District No. 1, Bob Hite, Manager.
Moffat County, Sheila Cowash, Deputy Planner.
Northern Colorado Water Conservancy District, L. Simpson, Secretary.
Pikes Peak Area Council of Governments, Maurice Rahimi.
Pitkin County Board of County Commissioners, Mark Fuller, County Development Director.
Pueblo Board of Water Works, Alan Hamel, Executive Director.
Pueblo County Commissioners, Sollie Raso, Chairman.
Pueblo County Department of Public Safety and Operations, Steve Douglas, Director.
Pueblo West Metro Water District, E. M. Zamecki, Manager.
Rio Blanco County Board of County Commissioners, Terry Lowell.
Rio Grande Water Conservation District, Ralph Curtis, Manager.
Southeastern Colorado Water Conservancy District, C. L. Thomson, General Manager.
Southern Ute Indian Tribe, George Knoll, ANA/NRMP Coordinator.
Southwestern Water Conservation District, Edward Searle, Manager.
St. Charles Mesa Water Association, Lee Simpson, Manager.
Town of Breckenridge, Gary Roberts, Town Manager.
Town of Castle Rock, Phyllis Brown, Town Clerk.
Trinchera Water Conservancy District, Charlotte Sheely, President.
Uncompahgre Valley Water Users Association, J. Hokit, Manager.
Upper Arkansas Area Council of Governments, Bill Simpson, Executive Director.
Upper Arkansas River Water Conservancy District, K. Baker, General Manager.
Upper Eagle Valley Water and Sanitation District, Bill George, General Manager.
Upper Yampa Water Conservancy District, J. Fetcher.
Urban Drainage and Flood Control District, L. Scott Tucker, Executive Director.
Ute Mountain Ute Indian Tribe, Dorrance Steele.
Vail Valley Conservation and Water Authority, David Mott.
Yellow Jacket Water Conservancy District, F. G. Cooley, Secretary-Council.

Financial assistance was also provided by the U.S. Army, Corps of Engineers, U.S. Army; U.S. Air Force; Bureau of Land Management, Bureau of Mines, Bureau of Reclamation, National Park Service, U.S. Environmental Protection Agency, U.S. Federal Emergency Management Agency, and U.S. National Weather Service. Organizations that supplied data are acknowledged in station descriptions.

OVERVIEW OF HYDROLOGIC CONDITIONS
[West of the Continental Divide]

Prepared by Harold E. Petsch, Jr.

Precipitation

Precipitation data for water year 1989 were obtained from published reports of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Climatic Center, for the National Weather Service division in Colorado that is west of the Continental Divide. These data are listed in table 1. Precipitation and departures from normal precipitation (1951-80) are listed for the first 6 months of the water year when precipitation is predominately snow and for the remaining 6 months when precipitation is predominately rain. Also listed are the precipitation and departure from normal precipitation for the entire water year. Precipitation for water year 1989 was 18 percent less than normal in the Colorado Drainage Basin.

Graphs of monthly precipitation for the water year and for normal monthly precipitation at selected weather stations are shown in figure 3. Monthly precipitation data for water year 1989 were supplemented by data obtained from the Colorado State University, Department of Atmospheric Science, Colorado Climate Center.

Table 1.--Precipitation during water year 1989 and departures from normal precipitation (1951-80), in inches

National Weather Service division	October-March		April-September		Water year 1989	
	Precipitation	Departure from normal	Precipitation	Departure from normal	Precipitation	Departure from normal
Colorado Drainage Basin	7.01	-0.60	5.64	-2.11	12.65	-2.71

Streamflow

Monthly mean discharges during water year 1989 at selected streamflow-gaging stations are compared to long-term mean monthly discharges in figure 4. Individual graphs show the varied streamflow west of the Continental Divide during the water year. The graphs for the gaging stations indicate that monthly discharges during the water year had the same general trend as long-term monthly discharges, but were consistently less than the long-term means during the months of May through September. Annual mean discharges for water year 1989 were from 22 to 44 percent less than long-term average at the selected gaging stations.

Monthly discharges for water year 1989 were greater than long-term means only for March for gaging stations 09163500, Colorado River near Colorado-Utah State line (fig. 4, site C), and 09251000, Yampa River near Maybell (fig. 4, site E). Monthly discharges for water year 1989 were greater than long-term means only for March and April for gaging stations 09070000, Eagle River below Gypsum (fig. 4, site A), and 09172500 San Miguel River near Placerville (fig. 4, site D). Monthly discharges for water year 1989 for the remaining gaging stations (fig. 4, sites B, F, G) were greater than long-term means for four to six months during November through April. The mean discharge for the period May through July for water year 1989 was less than the long-term mean discharge for that period at each of the selected gaging stations. The May through July mean discharge for 1989 was from 37 to 42 percent less than the long-term mean at gaging stations 09070000, Eagle River below Gypsum (fig. 4, site A), 09114500, Gunnison River near Gunnison (fig. 4, site B), and 09361500, Animas River at Durango (fig. 4, site G); from 46 to 50 percent less at gaging stations 09172500 San Miguel River near Placerville (fig. 4, site D), and 09304500, White River near Meeker (fig. 4, site F); and from 56 to 61 percent less than the long-term means at gaging stations 09163500, Colorado River near Colorado-Utah State line (fig. 4, site C), and 09251000, Yampa River near Maybell (fig. 4, site E).

Peak discharges during water year 1989 and for the period of record for selected gaging stations are listed in table 2. The peak discharge at each of the selected gaging stations was less than the long-term 25th percentile value but was substantially greater than the previous low peak discharge at 15 of the sites. For the remaining 3 sites, the peak discharge was only 12 percent higher than the previous low peak discharge at gaging station 09034500, Colorado River at Hot Sulphur Springs; was only 6 percent higher than the previous low peak discharge at gaging station 09152500, Gunnison River near Grand Junction; but the peak discharge was lower than any previous peak discharge at gaging station 09171100, Dolores River near Bedrock.

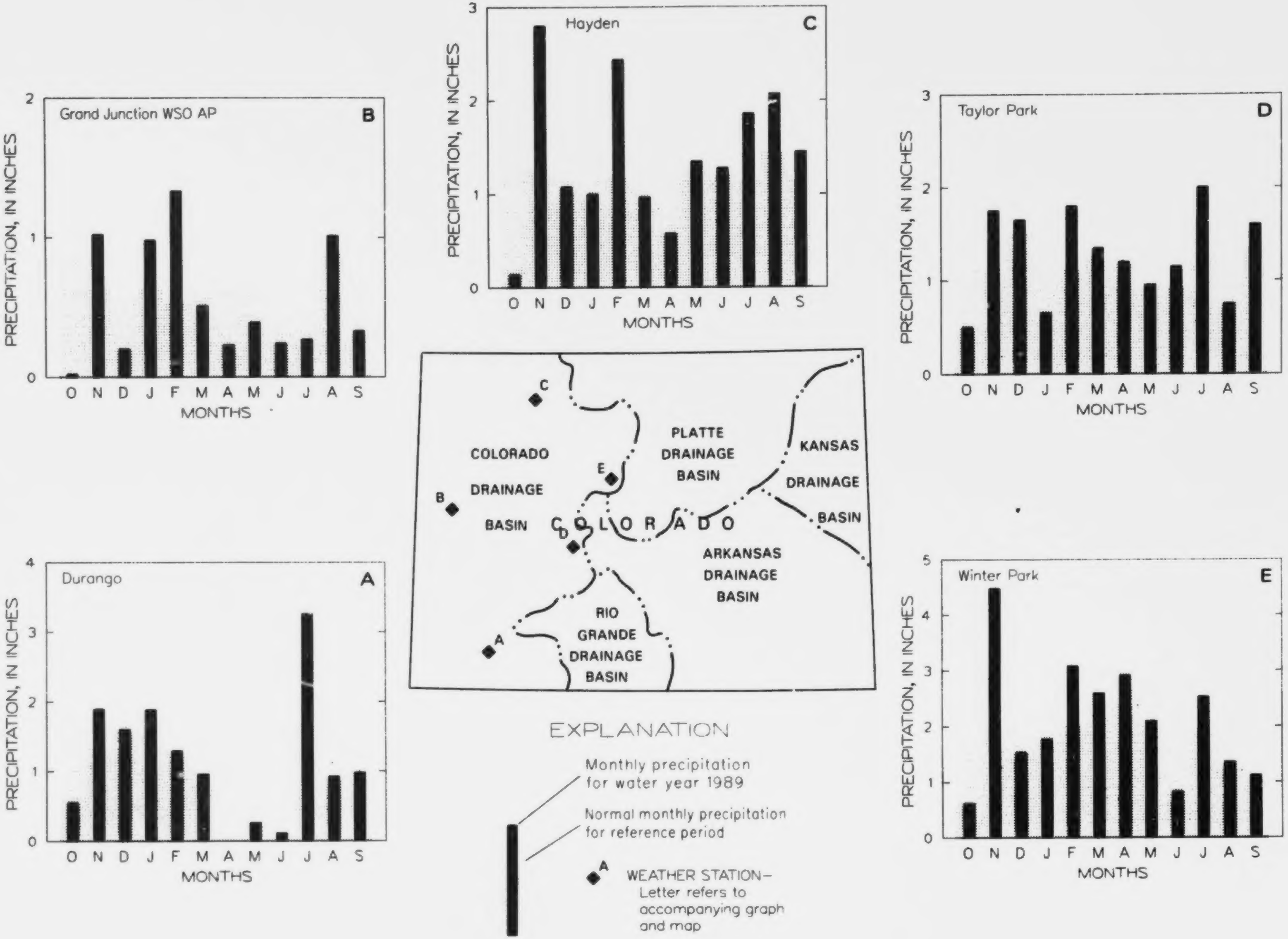


Figure 3.--Comparison of monthly precipitation for water year 1989 to normal monthly precipitation for the reference period 1951-80.

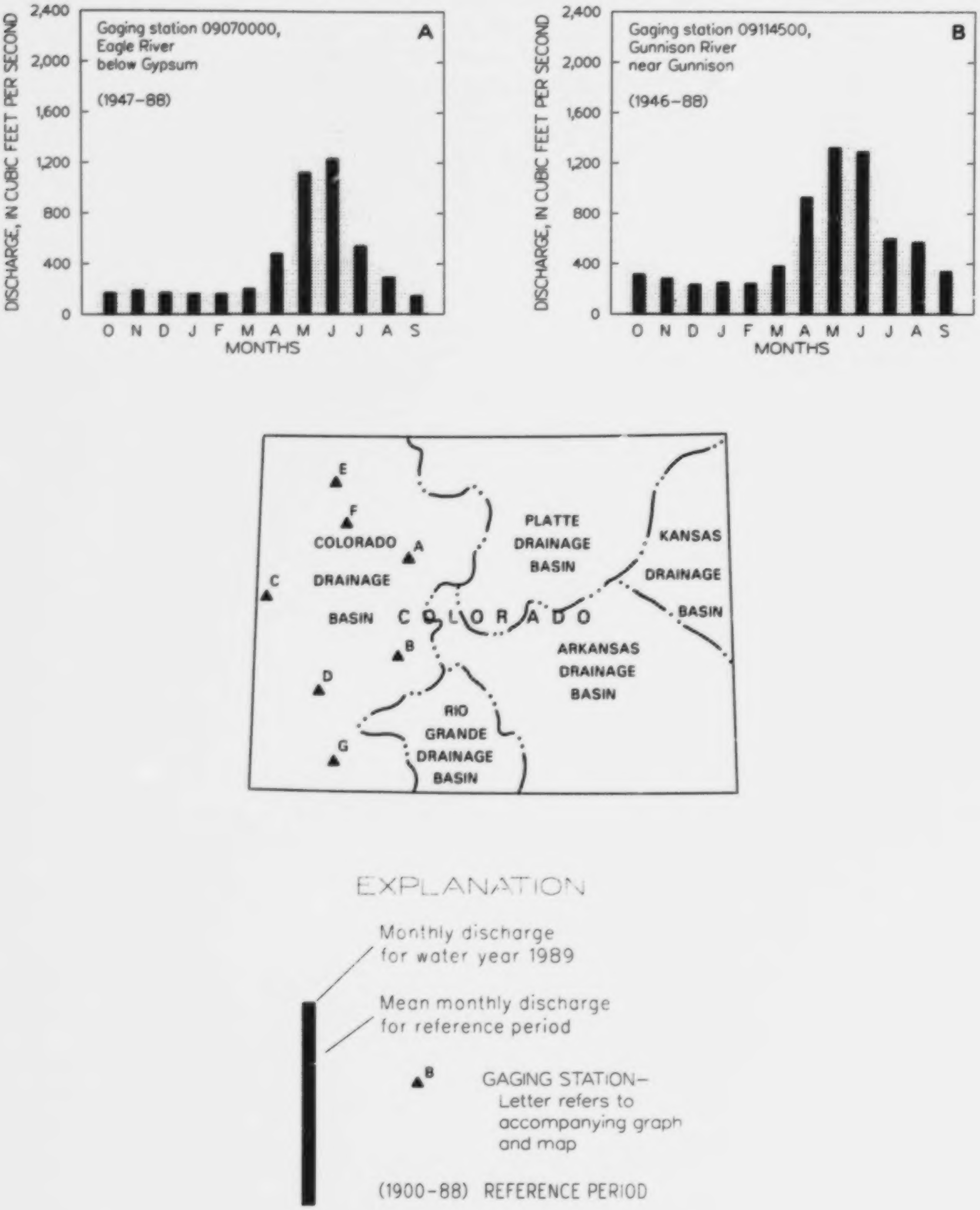


Figure 4.--Comparison of monthly discharges for water year 1989 to mean monthly discharges for the reference periods indicated on the individual graphs.

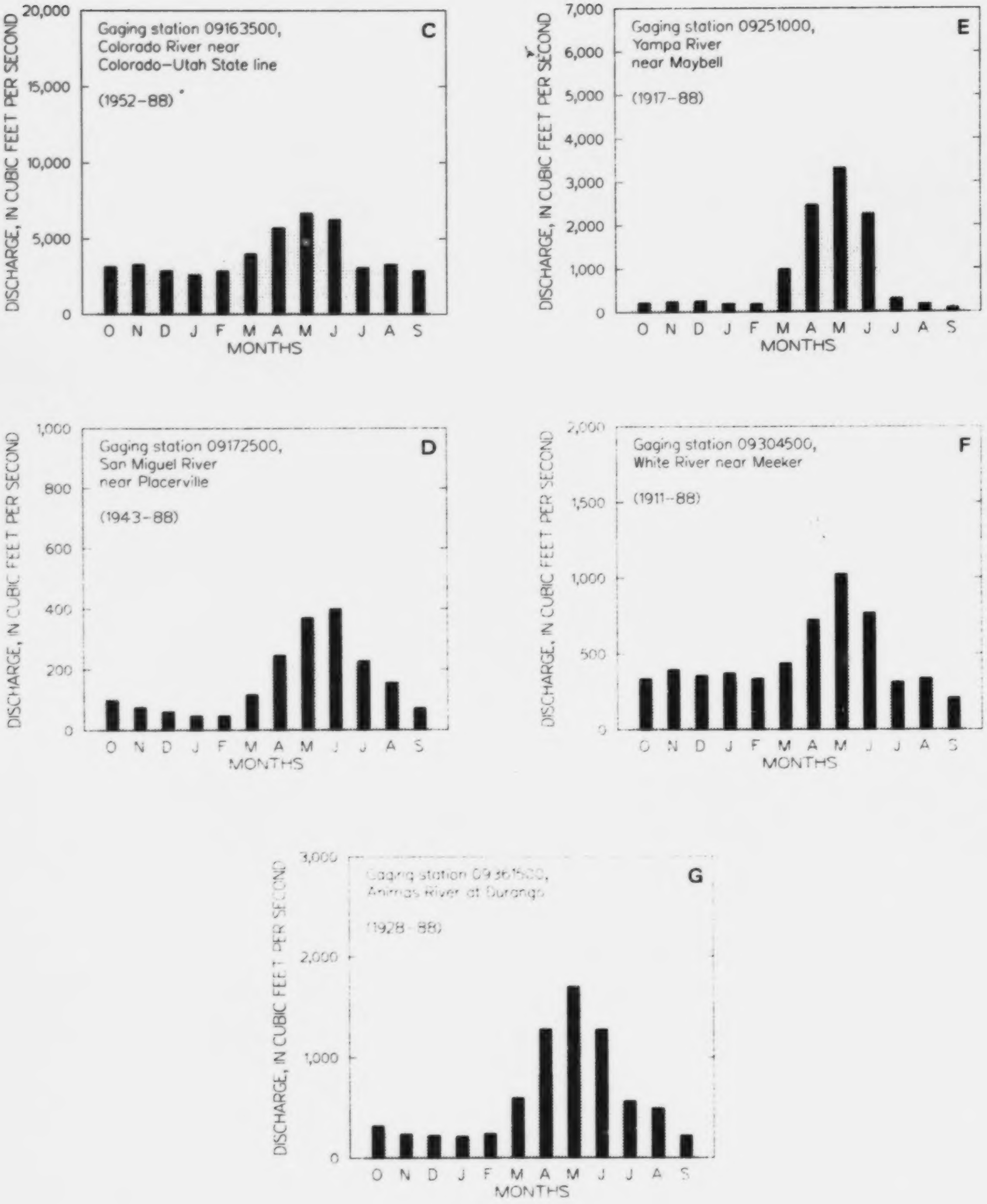


Figure 4.--(continued)

Table 2.--Peak discharges for water year 1989 and for the period of record at selected gaging stations

[mi^2, square miles; ft^3/s, cubic feet per second]

Gaging station identification		Drainage area (mi^2)	Period of record (water years)	Water year 1989		Period of record		Remarks on 1989 peak discharge
				Date	Peak discharge (ft^3/s)	Date	Peak discharge (ft^3/s)	
09034500	Colorado River at Hot Sulphur Springs	825	1905-88	5/12	393	6/15/21	10,300	Less than 25th percentile (3d lowest)
09070000	Eagle River below Gypsum	945	1947-88	5/30	2,190	5/25/84	7,020	Less than 25th percentile
09070500	Colorado River near Dotsero	4,394	1941-88	5/24	4,420	5/25/84	22,200	Less than 25th percentile
09085000	Roaring Fork River at Glenwood Springs	1,451	1906-9, 1911-88	6/17	3,340	7/1/57	19,000	Less than 25th percentile (2d lowest)
09085100	Colorado River below Glenwood Springs	6,013	1967-88	5/30	7,620	5/25/84	31,500	Less than 25th percentile (2d lowest)
09095500	Colorado River near Cameo	8,050	1934-88	5/30	8,530	5/26/84	39,300	Less than 25th percentile (4th lowest)
09114500	Gunnison River near Gunnison	1,012	1911-27, 1945-88	5/30	1,950	6/13/18	11,400	Less than 25th percentile
09132500	North Fork Gunnison River near Somerset	526	1934-88	4/21	2,080	5/24/84	9,220	Less than 25th percentile
09149500	Uncompahgre River at Delta	1,129	1903-31, 1939-88	8/11	976	5/15/84	5,800	Less than 25th percentile
09152500	Gunnison River near Grand Junction	7,928	1897-99, 1902-6, 1917-88	4/22	3,960	5/23/20	35,700	Less than 25th percentile (3d lowest)
09163500	Colorado River near Colorado-Utah State line	17,843	1951-88	5/19	9,970	5/27/84	69,800	Less than 25th percentile (2d lowest)
09166500	Dolores River at Dolores	504	1896-1903, 1911-12, 1922-88	5/9	1,810	10/5/11	10,000	Less than 25th percentile
09171100	Dolores River near Bedrock	2,145	1972-88	4/19	1,010	4/30/73	9,500	New low
09239500	Yampa River at Steamboat Springs	604	1904-6, 1910-88	5/29	2,030	6/14/21	6,820	Less than 25th percentile
09251000	Yampa River near Maybell	3,410	1904-5, 1916-88	5/13	4,940	5/17/84	25,100	Less than 25th percentile (3d lowest)
09304500	White River near Meeker	755	1901-5, 1910-88	5/30	1,520	5/25/84	6,950	Less than 25th percentile (3d lowest)
09346400	San Juan River near Carracas	1,230	1962-88	5/25	1,830	6/6/70	9,730	Less than 25th percentile (3d lowest)
09361500	Animas River at Durango	692	1912-88	5/24	2,780	10/5/11	25,000	Less than 25th percentile

Chemical Quality of Streamflow

To determine if substantial changes occurred during water year 1989 in the chemical quality of streamflow, an analysis was made of specific conductance, which was measured at gaging stations on five representative streams. Each gaging station either is the most downstream station on that stream or is representative of a substantial part of the drainage area of that stream. The frequency of the specific conductance measurements was approximately monthly except at gaging station 09095500, Colorado River near Cameo. The frequency of specific conductance measurements at the gaging station 09095500, Colorado River near Cameo, was approximately monthly during the water years 1979-84, and has been approximately weekly since water year 1985, but fewer measurements than the normal have been made during the months of December through February. A comparison of the range and the distribution of the specific conductance for water year 1989 to long-term values for each selected gaging station is shown in figure 5. In order to reduce any statistical bias that may be caused by the variations in measurement frequency at the gaging station 09095500, Colorado River near Cameo, an average specific conductance value was used for each month at that station.

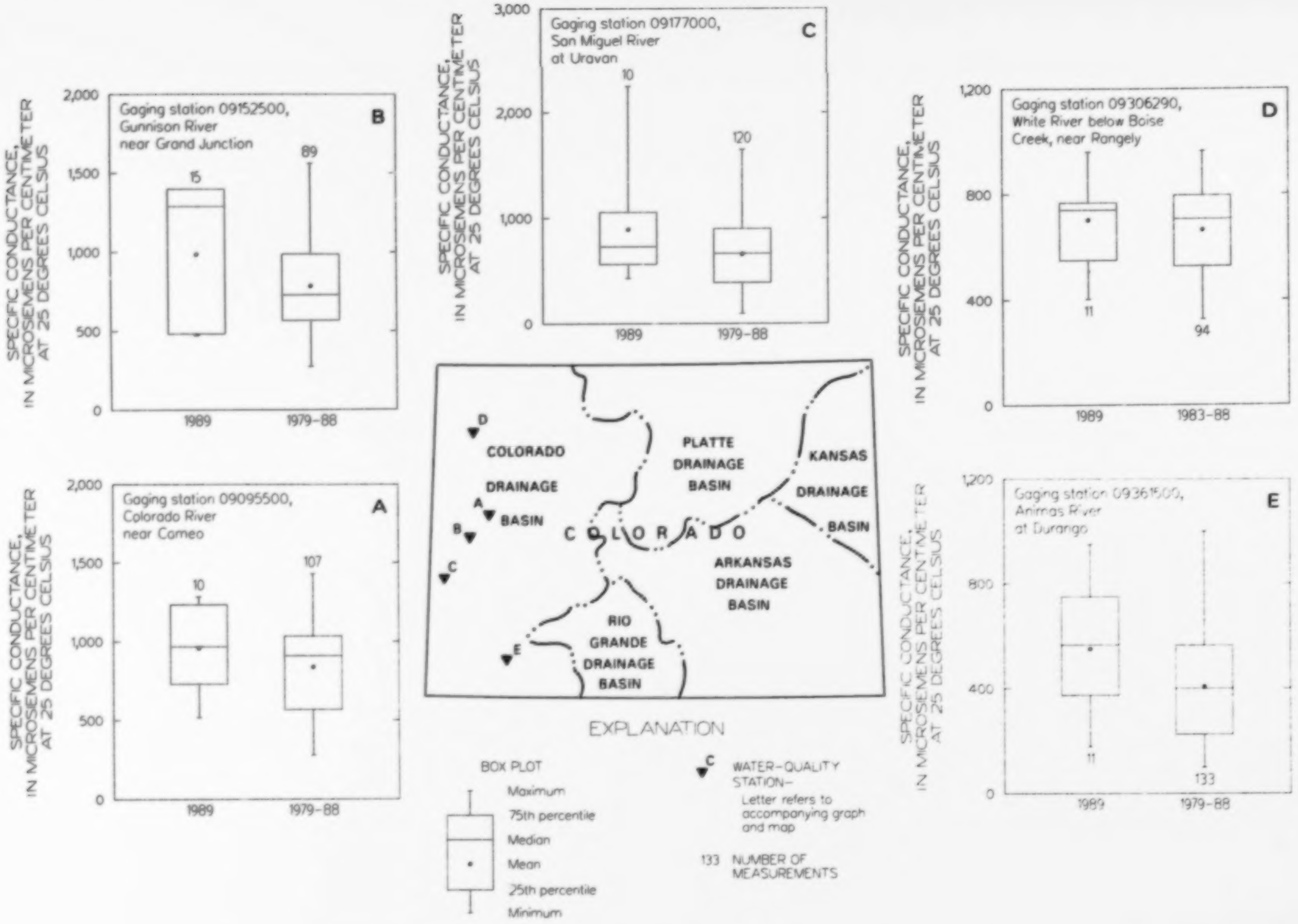


Figure 5.--Comparison of range and distribution of specific conductance measured during water year 1989 to long-term values.

Specific conductance can be used to estimate the dissolved-solids concentration in water because specific conductance is directly proportional to the concentrations of ions in water. To determine if there were significant differences between values of specific conductance for water year 1989 and values for the period of record used for comparison, a statistical technique called the Wilcoxon-Mann-Whitney rank sum test was used. This test is a non-parametric counterpart to the common t-test and does not require the data to have normal distribution.

The Wilcoxon-Mann-Whitney rank sum test was applied to the hypothesis that the mean specific conductance for water year 1989 was equal to the mean for the period of record. The procedure for testing the hypothesis involves computing a test statistic from the ranks of the data by using a pooled standard deviation and comparing the test statistic to a value obtained from a table of "Student's" t values (Box and others, 1978). The table value is (1 - alpha/2), where alpha (the level of significance) equals 0.05, at the appropriate degrees of freedom for the number of samples. If the absolute value of the computed test statistic (t_R) is greater than the tabular t value (t_{tab}), the hypothesis is rejected. A rejection of the hypothesis is statistical evidence that the two means are different.

Results of the Wilcoxon-Mann-Whitney rank sum tests for the five gaging stations are listed in table 3. For each station the tests indicate the mean specific conductance for water year 1989 and the mean specific conductance for the period of record are not different statistically.

Table 3.--Results of Wilcoxon-Mann-Whitney rank sum tests comparing mean specific conductance of discharge for water year 1989 with mean for the period of record at selected gaging stations

[Specific conductance, in microsiemens per centimeter at 25 degrees Celsius; A, accepted; t_R, calculated test statistic; t_{tab}, t-values from standard table]

Gaging station identification	Specific conductance						Wilcoxon-Mann-Whitney rank sum test			
	Water year 1989			Period of record						
	Number of values	Mean	Standard deviation	Number of values	Mean	Standard deviation	Period used (water year)	t_R	t_{tab}	Hypothesis
09095500 Colorado River near Cameo	10	958	282	107	838	289	1979-88	1.26	1.98	A
09152500 Gunnison River near Grand Junction	15	987	434	99	786	285	1979-88	1.31	1.99	A
09177000 San Miguel River at Uravan	10	893	524	120	659	303	1979-88	1.39	1.98	A
09306290 White River below Boise Creek, near Rangely	11	702	156	94	664	166	1983-88	.51	1.99	A
09361500 Animas River at Durango	11	561	245	133	407	201	1979-88	1.93	1.98	A

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 57 small sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

EXPLANATION OF THE RECORDS

The surface-water records published in this report are for the 1989 water year that began on October 1, 1988, and ended September 30, 1989. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface water. The locations of the stations where the surface-water data were collected are shown in figures 1 and 2. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station, whether stream site or well, in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for miscellaneous sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for surface-water stations where only infrequent measurements are made.

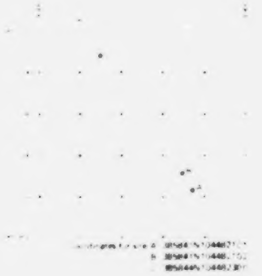
Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indention in the "List of Stations" in the front of this report. Each indention represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as [illegible], which appears just to the left of the station name, includes the two-digit Part number "09" plus the six-digit downstream-order number "[illegible]." The Part number designates the major river basin; for example, Part "09" is the Colorado River basin.

Latitude-Longitude System

The identification numbers for wells, springs, and miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote the degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the sites within a 1-second grid. This site-identification number, once assigned, is a pure number, and may have no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See figure below.)



System for numbering wells, springs, and miscellaneous sites.

The local well number locates a well within a 10-acre tract using the U. S. Bureau of Land Management system of land subdivision. The components of the local well number proceed from the largest to the smallest land subdivisions. This is in contrast to the legal description, which proceeds from the smallest to the largest land subdivision. The largest subdivision is the survey. Colorado is governed by three surveys: The Sixth Principal Meridian Survey (S), the New Mexico Survey (N), and the Ute Survey (U). Costilla County was not included in any of the above official surveys. This report follows the convention of the Costilla County Assessor in which the northern part of the county is governed by the Sixth Principal Meridian Survey and the southern part of the county is governed by a local system called the Costilla Survey (C). The first letter of the well location designates the survey.

A survey is subdivided into four quadrants formed by the intersection of the baseline and the principal meridian. The second letter of the well location designates the quadrant: A indicates the northeast quadrant, B the northwest, C the southwest, and D the southeast. A quadrant is subdivided in the north-south direction every 6 mi by townships and is divided in the east-west direction every 6 mi by ranges. The first number of the well location designates the township and the second number designates the range.

The 36-mi^2 area described by the township and range designation is subdivided into 1-mi^2 areas called sections. The sections are numbered sequentially. The third number of the well location designates the section. The section, which contains 640 acres, is subdivided into quarter sections. The 160-acre area is designated by the first letter following the section: A indicates the northeast quarter, B the northwest, C the the southwest, and D the southeast. The quarter section is subdivided into quarter-quarter sections. The 40-acre area is designated in the same manner by the second letter following the section. The 10-acre area is designated in the same manner by the third letter following the section. If more than one well is located within the 10-acre tract, the wells are numbered sequentially in the order in which they were originally inventoried. If this number is necessary, it will follow the three-letter designation.

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles. Records of miscellaneous discharge measurements or of measurements from special studies may be considered as partial records, but they are presented separately in this report. Locations of crest-stage partial record stations for which data are given in this report are shown in figure 2.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationships between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relationship between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage, with digital recorders that punch stage values on paper tapes at selected time intervals, with electronic recorders that store stage values on computer chips at selected time intervals, or with satellite data collection platforms that trasmit near real-time data at selected time intervals to office computers. Measurements of discharge are made with current meters using methods adapted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow over dams or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and records for other stations in the same or nearby basins for comparable periods.

At some stream-gaging stations the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

In computing records of lake or reservoir contents, it is necessary to have available from surveys, curves, or tables defining the relationship of stage and content. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relationship changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relationship. Even when this is done, the contents computed may become increasingly in error as time since the last survey increases. Discharges over lake or reservoir spillways are computed from stage-discharge relationships much as other stream discharges are computed.

For some gaging stations there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outlfow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections. "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

The records published for each gaging station consist of two parts, the manuscript or station description and the data table for the current water year. The manuscript provides, under various headings, descriptive information, such as station location; period of record; average discharge; historical extremes; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not, and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see glossary), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a remarks statement is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

AVERAGE DISCHARGE.--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations having at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at a station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development.

EXTREMES FOR PERIOD OF RECORD.--Extremes may include maximum and minimum stages and maximum and minimum discharges or content. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage gage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and was determined and is reported in the same manner as the maximum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

EXTREMES FOR CURRENT YEAR.--Extremes given here are similar to those for the period of record, except the peak discharge listed may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District office to determine if the published records were ever revised after the station was discontinued. Of course, if the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

If applicable, data collected at partial-record stations follow the information for continuous-record sites. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those meausrements and others collected for some special reason are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing a table footnote, "e Estimated," or by listing the dates of estimated record in the REMARKS paragraph of the station description.

Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of their true value; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned, are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for daily values less than 1 ft^3/s; to the nearest tenth between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures for more than 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Records Available

The National Water Data Exchange (NAWDEX), U.S. Geological Survey, Reston, VA 22092, maintains an index of records of discharge collected by other agencies but not published by the Geological Survey. Information on records at specific sites can be obtained from that office upon request.

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables are on file in the Colorado District office. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the District office.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

"In March 1989 the National Water-Quality Laboratory discovered a bias in the turbidemetric method for sulfate analysis, indicating that values below 75 mg/L have a median positive bias of 2 mg/L above the true value for the period between 1982 and 1989. Sulfate values in this report have not been corrected for this bias."

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period oaf years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched or recorded at short intervals on a magnetic tape, computer chip, paper tape, or some other medium. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 1.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs signficantly from that at the nearby surface-water station, the continuing water-quality record is published with its own number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

Onsite Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these references are listed on pages 30 and 31 of this report. Also, detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey District office.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals, depends on flow conditions and other factors which must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the U.S.G.S. District Office whose address is given on the back of the title page of this report.

Water temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are recorded to the nearest 0.1 degree Celsius. Water temperatures measured at the time of water-discharge measurements are published in this report as supplemental water-quality for gaging stations.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally, all other samples are analyzed in the Geological Survey laboratories in Arvada, Colo., or Doraville, Ga. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratories are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor temperature record, sediment pumping sampler, or other sampling device is in operaiton at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Remark Codes

The following remarks codes may appear with the water-quality data in this report:

PRINTED OUTPUT	REMARK
E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Based on non-ideal colony count
M	Presence of material verified but not quantified

ACCESS TO WATSTORE DATA

The National WATer Data STOrage and REtrieval System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from each of the Water Resources Division's District offices (see address given on the back of the title page).

General inquires about WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
437 National Center
Reston, Virginia 22092

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System (SI) Units on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equal to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Adenosine triphosphate (ATP) is an organic, phosphate-rich, compound important in the transfer of energy in organisms. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

Algae are mostly aquatic single-celled, colonial, or multicelled plants, containing chlorophyll and lacking roots, stems, and leaves.

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C ± 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5°C ± 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in the intestine of warmblooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as Gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organism which produce red or pink colonies with 48 hours at 35°C ± 1.0°C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by micro-organisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square meter (g/m^2).

Dry mass refers to the mass of residue present after drying in an oven at 105°C for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and the ash mass and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

Cfs-day is the volume of water represented by flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons or 2,447 cubic meters.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water, and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common green pigments in plants.

Color unit is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at a gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of salt water.

Cubic foot per second (ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic feet per second per square mile ($(ft^3/s)/mi^2$) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific time.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved refers to that material in a representative water sample which passes through a 0.45 um membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage" although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate ($CaCO_3$).

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number.

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each groundwater observation well.

Measuring point (MP) is an arbitrary permanent reference point from which the distance to the water surface in a well is measured to obtain the water level.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Methylene blue active substances (MBAS) are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

Micrograms per gram (ug/g) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter (UG/L, ug/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L and is based on the mass of dry sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

National Trends Network (NTN) is a 150-station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which incudes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP).

Organism is any living entity.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per unit area habitat, usually square meter (m^2), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter or particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with the recommendation made by the American Geophysical Unit Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay..........	0.00024 - 0.004	Sedimentation
Silt..........	.004 - .062	Sedimentation
Sand..........	.062 - 2.0	Sedimentation or sieve
Gravel........	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population in terms of types, numbers, mass, or volume.

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is a community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment, and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton is dominated by small crustaceans and rotifers.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated by the plants (carbon method).

Milligrams of carbon per area or volume per unit time mg C/(m^2.time) for periphyton and macrophytes and mg C/(m^3.time) for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time mgO/(m^2.time) for periphyton and macrophytes and mgO/(m^3.time) for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

Runoff in inches (IN, in) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bed load is considered to consist of particles in transit within 0.25 ft of the streambed.

Bed load discharge (tons per day) is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft^3/s) x 0.0027.

Suspended-sediment load is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry mass or volume, that passes a section during a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

7-day 10-year low flow ($7Q_{10}$) is the discharge at the 10-year recurrence interval taken from a frequency curve of annual values of the lowest mean discharge for 7 consecutive days (the 7-day low flow).

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and the volume of water, per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is they physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton.

Surface area of a lake is that area outlined on the latest U.S.G.S. topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

Surficial bed material is the part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is associated with the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 um membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituents.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 um membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchial scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata, is the following:

Kingdom	Animal
Phylum	Arthropoda
Class	Insecta
Order	Ephemeroptera
Family	Ephemeridae
Genus	Hexagenia
Species	Hexagenia limbata

Thermograph is an instrument that continuously records variation of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined all of the constituent in the sample.)

Total discharge is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross-section per unit of time. This term needs to be qualifed, such as "total sediment discharge," "total chloride discharge," and so on.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses, because different digestion procedures are likely to produce different analytical results.

Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

Water year in Geological Survey reports dealing with surface-water supply is the 12-month period, October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1980, is called the "1980 water year."

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976).

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

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DISCONTINUED GAGING STATIONS

The following continuous-record gaging stations in Colorado have been discontinued. Daily records were collected and published for the period of record shown for each station.

Station number		Drainage area (sq mi)	Period of record (calendar years)
09010100	*Lady Creek near Grand* Lake, CO	0.08	1969-75
09010400	Jimmy Creek near Grand Lake, CO	0.08	1969-75
09010600	Onahu Creek near Grand Lake, CO	8.84	1969
09011000	Colorado River near Grand Lake, CO	102	1904-18, 1933-86
09011500	Little Columbine Creek above Shadow Mountain Lake at Grand Lake, CO	1.65	1950-55
09012400	Tonahutu Creek near Grand Lake, CO	16.0	1969
09012410	Harbison Ditch near Grand Lake, CO	--	1969
09012420	Tonahutu Creek below Harbison Ditch near Grand Lake, CO	--	1969
09012500	North Inlet at Grand Lake, CO	45.9	1905-09, 1910-12, 1947-55
09013500	East Inlet near Grand Lake, CO	27.2	1947-55
09014000	Grand Lake Outlet at Grand Lake, CO	76.3	1904-09, 1910-13
09015000	Colorado River below Shadow Mountain Reservoir, CO	190	1947-59
09015500	Columbine Creek above Lake Granby near Grand Lake, CO	7.38	1950-55
09016000	Roaring Fork above Lake Granby, CO	5.95	1951-55
09016500	Arapahoe Creek at Monarch Lake Outlet, CO	46.9	1944-71
09017000	Arapahoe Creek below Monarch Lake, CO	56.9	1934-44
09018000	Stillwater Creek above Lake Granby, CO	17.5	1950-55
09019000	Colorado River below Lake Granby, CO	312	1950-82
09020000	Willow Creek near Granby, CO	109	1934-53
09020500	Willow Creek above Willow Creek Reservoir, CO	127	1953-60
09021000	Willow Creek below Willow Creek Reservoir, CO	134	1953-82
09022500	Moffat Water Tunnel at East Portal, CO	--	1935-82
09023500	Fraser River above Winter Park, CO	22.4	1907-09, 1934-37
09031900	Ranch Creek Ditch near Fraser, CO	--	1948-67
09032500	Ranch Creek near Tabernash, CO	51.3	1934-60
09033000	Meadow Creek near Tabernash, CO	8.03	1935-56
09033500	Strawberry Creek near Granby, CO	11.6	1935-45
09034000	Fraser River at Granby, CO	297	1904-09, 1937-55
09034800	Little Muddy Creek near Parshall, CO	6.52	1953-65
09035820	South Fork Williams Fork at Upper Station near Ptarmigan Pass, CO	2.73	1984-87
09035830	South Fork Williams Fork near Ptarmigan Pass, CO	4.01	1984-88
09035840	South Fork Williams Fork above Tributary near Ptarmigan Pass, CO	5.53	1984-87
09035845	South Fork Williams Fork Tributary near Ptarmigan Pass, CO	0.60	1984-88
09035850	South Fork Williams Rork above Short Creek near Ptarmigan Pass, CO	6.53	1984-87
09035870	South Fork Williams Fork below Short Creek near Ptarmigan Pass, CO	20.0	1984-87
09036500	Keyser Creek near Leal, CO	13.8	1942-52
09037000	Williams Fork near Scholl, CO	141	1910-17
09037200	Skylark Creek near Parshall, CO	2.42	1958-65
09039000	Troublesome Creek near Pearmont, CO	44.6	1953-83
09039500	Troublesome Creek at Atmore Ranch near Troublesome, CO	48.8	1937-43
09040000	East Fork Troublesome Creek near Troublesome, CO	76.0	1937-43, 1953-83
09040500	Troublesome Creek near Troublesome, CO	168	1904-05, 1921-22, 1937-56
09041000	Muddy Creek near Kremmling, CO	87.4	1937-43, 1955-71
09041100	Antelope Creek near Kremmling, CO	11.5	1955-68
09041200	Red Dirt Creek near Kremmling, CO	19.0	1955-74
09041300	Pass Creek near Kremmling, CO	17.3	1957-70
09043000	Monte Cristo Creek near Hoosier Pass, CO	5.66	1953-58
09044000	Hoosier Creek near Hoosier Pass, CO	1.15	1953-58
09044500	Bemrose Creek near Hoosier Pass, CO	1.95	1953-58
09045000	McCullough Gulch near Breckenridge, CO	4.79	1953-58
09046500	Spruce Creek near Breckenridge, CO	5.23	1953-58
09047000	Blue River at Dillon, CO	128	1910-61
09048000	Snake River at Dillon, CO	90.9	1910-19, 1929-64
09049200	West Tenmile Creek at Copper Mountain, CO	21.0	1973-79
09050000	Tenmile Creek at Frisco, CO	81.0	1942-50
09050500	Tenmile Creek at Dillon, CO	111	1910-19, 1929-61
09051000	Straight Creek near Dillon, CO	12.9	1943-52
09051500	Willow Creek near Dillon, CO	13.4	1942-51
09052500	Boulder Creek near Dillon, CO	9.89	1942-51
09053000	Slate Creek near Dillon, CO	16.6	1942-54
09053500	Blue River above Green Mountain Reservoir, CO	511	1943-71, 1985-88
09054500	Black Creek above Green Mountain Reservoir, CO	18.5	1944-53
09055000	Otter Creek above Green Mountain Reservoir, CO	8.40	1944-53
09055500	Cataract Creek above Green Mountain Reservoir, CO	13.6	1944-53
09056000	Blue River near Kremmling, CO	571	1904-08
09058600	Dickson Creek near Minturn, CO	3.41	1964-71
09060500	Rock Creek near Toponas, CO	47.6	1952-81
09060700	Egeria Creek near Toponas, CO	28.2	1965-73
09060800	Big Alkali Creek near Burns, CO	14.2	1958-65
09060900	Catamount Creek near Burns, CO	5.31	1955-61
09060950	Big Alkali Creek below Castle Creek near Burns, CO	34.2	1981-86
09061000	Sunnyside Creek near Burns, CO	9.04	1952-58
09061500	Columbine Ditch near Fremont Pass, CO	--	1930-82
09062000	Ewing Ditch at Tennessee Pass, CO	--	1908-82
09062500	Wurtz Ditch near Tennessee Pass, CO	--	1931-82
09063500	Turkey Creek at Red Cliff, CO	29.4	1913-21, 1944-56
09066050	Black Gore Creek near Vail, CO	19.6	1974-79
09066250	Gore Creek at Vail, CO	57.3	1974-79
09066500	Gore Creek near Minturn, CO	101	1911-14, 1944-56
09067000	Beaver Creek at Avon, CO	14.3	1911, 1912-14, 1974-87, 1988
09067300	Alkali Creek near Wolcott, CO	27.3	1958-65
09067500	Eagle River at Eagle, CO	629	1910-24
09067700	East Brush Creek at Yeoman Park near Eagle, CO	9.74	1965-72
09068000	Brush Creek near Eagle, CO	71.4	1959-72

DISCONTINUED GAGING STATIONS--Continued

Station number		Drainage area (sq mi)	Period of record (calendar years)
09069500	Gypsum Creek near Gypsum, CO	62.7	1950-55, 1965-72
09071100	Colorado River near Glenwood Springs, CO	--	1941-85
09072500	Colorado River at Glenwood Springs, CO	4,558	1899-1966
09072550	Roaring Fork above Lost Man Creek near Aspen, CO	9.10	1980-86
09073005	Lincoln Creek below Grizzly Reservoir near Aspen, CO	15.2	1980-86
09073500	Roaring Fork River at Aspen, CO	109	1910-21, 1931-64
09073700	Hunter Creek above Midway Creek near Aspen, CO	6.18	1964-80
09073720	Hunter Creek Feeder Conduit near Aspen, CO	--	1981-83
09073790	Midway Creek Feeder Conduit near Aspen, CO	--	1981-83
09073800	Midway Creek near Aspen, CO	8.62	1971-80
09073890	No Name Creek Feeder Conduit near Aspen, CO	--	1981-83
09073900	No Name Creek near Aspen, CO	6.54	1971-80
09075000	Castle Creek near Aspen, CO	67.0	1911-20
09075500	Roaring Fork below Aspen, CO	228	1913-18
09076000	Maroon Creek near Aspen, CO	41.7	1910-17
09077150	Fryingpan River Feeder Canal near Norrie, CO	--	1971-83
09077200	Fryingpan River near Ivanhoe Lake, CO	18.7	1963-82
09077250	Lily Pad Feeder Canal near Norrie, CO	--	1972-83
09077300	Granite Creek Feeder Conduit near Norrie, CO	--	1981-83
09077400	Fryingpan River near Norrie, CO	32.2	1963-67
09077600	Ivanhoe Creek near Norrie, CO	9.12	1963-76
09077605	Ivanhoe Creek Feeder Canal near Nast, CO	--	1976-83
09077610	Ivanhoe Creek near Nast, CO	9.43	1976-82
09077750	South Fork Fryingpan River Feeder Canal near Norrie, CO	--	1971-83
09077800	South Fork Fryingpan River at Upper Station near Norrie, CO	11.5	1963-82
09077900	South Fork Fryingpan River near Norrie, CO	17.3	1963-67
09077940	Chapman Gulch Feeder Canal near Norrie, CO	--	1971-83
09077945	Chapman Gulch near Nast, CO	6.00	1973-82
09077950	Chapman Gulch near Norrie, CO	6.38	1966-72
09077960	Sawyer Creek Feeder Canal near Norrie, CO	--	1972-83
09078000	Fryingpan River at Norrie, CO	90.6	1910-17, 1947-83
09078040	North Fork Fryingpan River Feeder Canal near Norrie, CO	--	1980-83
09078050	Morman Creek Feeder Canal near Norrie, CO	--	1979-83
09078060	Carter Creek Feeder Canal near Norrie, CO	--	1980-83
09078100	North Fork Fryingpan River above Cunningham Creek near Norrie, CO	12.0	1963-80
09078140	Cunningham Creek Feeder Canal near Norrie, CO	--	1979-83
09078150	Middle Cunningham Creek Feeder Canal near Norrie, CO	--	1980-83
09078200	Cunningham Creek near Norrie, CO	7.12	1963-80
09078300	North Fork Fryingpan River below Cunningham Creek near Norrie, CO	24.2	1963-68
09078500	North Fork Fryingpan River near Norrie, CO	42.0	1910-17, 1947-82
09078900	Lime Creek near Troutville, CO	4.56	1963-68
09079000	Lime Creek at Troutville, CO	7.76	1950-56
09079500	Lime Creek at Thomasville, CO	35.0	1950-56
09080000	Fryingpan River at Thomasville, CO	173	1915-20
09080100	Fryingpan River at Meredith, CO	191	1910-15, 1966-80
09080200	Fryintpan River at Ruedi, CO	226	1959-64
09080300	Rocky Fork Creek near Meredith, CO	12.3	1968-82
09080800	West Sopris Creek near Basalt, CO	14.4	1963-68
09081500	Crystal River at Marble, CO	74.3	1910-15, 1916-17
09081550	Crystal River at Placita, CO	107	1959-73, 1975-77
09082500	Crystal River near Redstone, CO	229	1935-63
09082800	North Thompson Creek near Carbondale, CO	26.8	[illegible]-79
09083000	Thompson Creek near Carbondale, CO	75.7	1950-60, 1964-68
09083700	Prince Creek near Carbondale, CO	3.04	1963-68
09084000	Cattle Creek near Carbondale, CO	31.1	1950-55, 1962-72
09084500	Fourmile Creek near Carbondale, CO	8.10	1941-47
09084600	Fourmile Creek near Glenwood Springs, CO	16.7	1957-65
09085200	Canyon Creek above New Castle, CO	23.8	1969-86
09085300	East Canyon Creek near New Castle, CO	15.1	1969-83
09085400	Possum Creek near New Castle, CO	6.41	1969-82
09085500	Canyon Creek near New Castle, CO	55.0	1954-60
09087500	Elk Creek at New Castle, CO	180	1922-24, 1954-60
09087600	Colorado River at New Castle, CO	6,308	1966-72
09088000	Baldy Creek near New Castle, CO	15.3	1955-61
09089000	West Divide Creek below Willow Creek near Raven, CO	34.9	1938-47, 1963-70
09090700	East Divide Creek near Silt, CO	40.8	1959-65
09091500	East Rifle Creek near Rifle, CO	34.3	1936-43, 1956-64
09092000	Rifle Creek near Rifle, CO	137	1939-46, 1952-64
09092500	Beaver Creek near Rifle, CO	7.90	1955-82
09092600	Battlement Creek near Parachute, CO	10.5	1956-65
09092800	West Parachute Creek near Parachute, CO	48.1	1957-62
09092830	Northwater Creek near Anvil Points, CO	12.6	1976-83
09092850	East Middle Fork Parachute Creek near Rio Blanco, CO	22.1	1976-83
09092960	East Fork Parachute Creek near Anvil Points, CO	14.5	1976-83
09092970	East Fork Parachute Creek near Rulison, CO	20.4	1976-83
09092980	Ben Good Creek near Rulison, CO	4.04	1976-83
09093000	Parachute Creek near Parachute, CO	141	1948-54, 1964-70, 1975-86
09093500	Parachute Creek at Parachute, CO	198	1921-27, 1948-54, 1971-82
09094200	Roan Creek above Clear Creek near De Beque, CO	151	1962-68
09094400	Clear Creek near De Beque, CO	110	1966-68
09095000	Roan Creek near De Beque, CO	321	1921-26, 1962-72, 1974-81
09095400	Dry Fork near De Beque, CO	109	1974-82
09095526	Government Highline Canal at 16 Road near Loma, CO	--	1975-83
09095528	Lateral No 48 near Mack, CO	--	1977-83
090955285	Government Highline Canal above Camp 7 Spillway near Mack, CO	--	1983-85
09095529	Camp No 7 Spillway near Mack, CO	--	1975-83

DISCONTINUED GAGING STATIONS--Continued

Station number		Drainage area (sq mi)	Period of record (calendar years)
09095530	Government Highline Canal near Mack, CO	--	1973-82
09095800	Plateau Creek near Heiberger, CO	18.6	1958-64
09096000	Plateau Creek at Upper Station near Collbran, CO	24.1	1937-43, 1951-58
09096500	Plateau Creek near Collbran, CO	80.4	1921-80
09096800	Buzzard Creek below Owens Creek near Heiberger, CO	49.7	1955-70
09097500	Buzzard Creek near Collbran, CO	143	1921-80
09097600	Brush Creek near Collbran, CO	9.57	1955-67
09098500	Atkinson Creek near Collbran, CO	0.85	1952-55
09099000	East Fork Big Creek near Collbran, CO	4.92	1940-41, 1950-55
09099500	Big Creek at Upper Station near Collbran, CO	20.2	1945-56
09100000	Big Creek near Collbran, CO	27.1	1937-44
09100500	Cottonwood Creek at Upper Station near Molina, CO	14.0	1945-57
09101000	Cottonwood Creek near Molina, CO	17.8	1937-43
09101500	Bull Creek at Upper Station near Molina, CO	9.85	1945-53
09104000	Coon Creek near Mesa, CO	9.35	1937-43
09104500	Mesa Creek near Mesa, CO	6.79	1937-60
09105000	Plateau Creek near Cameo, CO	592	1935-83, 1986
09106000	Colorado River near Palisade, CO	8,738	1901-33
09106104	Kiefer Extension to Grand Valley Canal near Fruita, CO	--	1975-85
09106108	Kiefer Extension to Grand Valley Canal near Loma, CO	--	1975-85
09106200	Lewis Wash near Grand Junction, CO	4.72	1973-79
09108000	Willow Creek at Taylor Park, CO	--	1913-14, 1929-34
09110500	East River near Crested Butte, CO	90.3	1939-51
09111000	Coal Creek near Crested Butte, CO	8.65	1941-46
09111500	Slate River near Crested Butte, CO	70.1	1940-51
09112000	Cement Creek near Crested Butte, CO	26.1	1910-13, 1940-51
09112200	East River below Cement Creek near Crested Butte, CO	235	1963-72, 1979-81
09113000	Castle Creek near Baldwin, CO	20.3	1944-50
09113300	Ohio Creek at Baldwin, CO	47.2	1958-70
09113500	Ohio Creek near Baldwin, CO	121	1940-50, 1958-71, 1979-81
09114000	Ohio Creek near Gunnison, CO	167	1944-50
09115500	Tomichi Creek at Sargents, CO	149	1916-22, 1937-72
09116000	Tomichi Creek near Doyleville, CO	209	1944-50
09117000	Tomichi Creek at Parlin, CO	427	1944-51, 1963-70
09118000	Quartz Creek near Ohio City, CO	106	1937-50, 1959-70
09118500	Cochetopa Creel near Parlin, CO	361	1940-48
09120500	Gunnison River at Iola, CO	2,352	1899, 1903, 1937-1951
09121500	Cebolla Creek near Lake City, CO	25.2	1946-54
09121800	Cebolla Creek near Powderhorn, CO	248	1960-63
09122000	Cebolla Creek at Powderhorn, CO	340	1937-55
09122500	Soap Creek near Sapinero, CO	57.4	1955-66
09123000	Soap Creek at Sapinero, CO	86.0	1910-14, 1945-52
09123400	Lake Fork below mill Gulch near Lake City, CO	57.5	1981-86
09123500	Lake Fork at Lake City, CO	115	1917-24, 1928-30, 1931-37
09124000	Henson Creek at Lake City, CO	83.1	1917-19, 1928-30, 1931-37
09124700	Gunnison River below Blue Mesa Dam, CO	3,453	1963-68
09125000	Curecanti Creek near Sapinero, CO	35.0	1945-72
09126500	Cimarron River at Cimarron, CO	209	1902-05, 1962-67
09127000	Cimarron River below Squaw Creek at Cimarron, CO	229	1942-52
09127500	Crystal Creek near Maher, CO	42.2	1916-19, 1945-54, 1960-69
09127998	Gunnison River above Gunnison Tunnel, CO	3,965	1905-65
09127999	Gunnison Tunnel near Montrose, CO	3,965	1910-65
09129000	Smith Fork at Crawford, CO	63.1	1954-60
09129500	Iron Creek near Crawford, CO	71.5	1947-52
09129600	Smith Fork near Lazear, CO	166	1976-87
09129800	Clear Fork near Ragged Mountain, CO	38.5	1965-73
09130500	East Muddy Creek near Bardine, CO	133	1934-53
09130600	West Muddy Creek near Ragged Mountain, CO	7.42	1955-65
09130800	West Muddy Creek near Bowie, CO	27.7	1968-74
09131100	Cow Creek near Paonia, CO	12.0	1968-82
09131200	West Muddy Creek near Somerset, CO	49.9	1961-73
09132000	Ruby Anthracite Creek near Floresta, CO	20.7	1938-43, 1954-58
09132050	Anthracite Creek near Somerset, CO	94.6	1977-81
09132700	Main Hubbard Creek near Paonia, CO	1.33	1960-68
09132800	Middle Hubbard Creek near Paonia, CO	1.36	1960-68
09132900	West Hubbard Creek near Paonia, CO	2.34	1960-73
09132920	Hubbard Creek near Bowie, CO	20.7	1968-74
09133000	North Fork Gunnison River near Paonia, CO	653	1921-32
09134050	Minnesota Creek at Paonia, CO	53.5	1976-79
09134200	Cottonwood Creek near Hotchkiss, CO	41.0	1976-79
09134500	Leroux Creek near Cedaredge, CO	34.5	1936-56, 1960-69
09134700	Cow Creek near Cedaredge, CO	7.24	1960-69
09135000	Leroux Creek near Lazear, CO	51.8	1917-26
09136200	Gunnison River near Lazear, CO	5,241	1962-85
09136500	Currant Creek near Cedaredge, CO	42.2	1948-54
09137050	Currant Creek near Read, CO	56.9	1976-87
09137800	Dirty George Creek near Grand Mesa, CO	10.6	1957-69
09139200	Ward Creek near Grand Mesa, CO	12.2	1957-69
09139500	Ward Creek near Cedaredge, CO	20.4	1939-46
09140200	Kiser Creek near Grand Mesa, CO	5.35	1957-69
09140500	Kiser Creek near Cedaredge, CO	10.8	1939-46
09140700	Cottonwood Creek near Grand Mesa, CO	2.15	1957-68
09141000	Cottonwood Creek near Cedaredge, CO	4.39	1939-46
09141200	Youngs Creek near Grand Mesa, CO	10.3	1957-69
09141500	Youngs Creek near Cedaredge, CO	11.3	1939-46
09142000	Ward Creek below Kiser Creek near Cedaredge, CO	52.2	1944-52
09144000	Surface Creek at Eckert, CO	43.6	1939-51

DISCONTINUED GAGING STATIONS--Continued

Station number		Drainage area (sq mi)	Period of record (calendar years)
09144200	Tongue Creek at Cory, CO	197	1957-68, 1976-87
09144500	Red Mountain Creek near Ironton, CO	18.1	1947-55
09145000	Uncompahgre River At Ouray, CO	42.0	1908, 1910-24
09145500	Canyon Creek at Ouray, CO	25.8	1910-15
09146000	Uncompahgre River below Ouray, CO	75.2	1913-29
09146400	West Fork Dallas Creek near Ridgway, CO	14.1	1955-70
09146500	East Fork Dallas Creek near Ridgway, CO	16.8	1947-1953, 1960-1970
09146550	Beaver Creek near Ridgway, CO	12.2	1960-68
09146600	Pleasant Valley Creek near Noel, CO	8.17	1955-67
09147100	Cow Creek near Ridgway, CO	45.4	1955-73
09149400	Spring Creek near Beaver Hill, CO	41.6	1977-81
09149420	Spring Creek near Montrose, CO	76.6	1977-81
09149900	Potter Creek near Columbine Pass, CO	7.10	1980-81
09149910	Potter Creek near Olathe, CO	26.0	1980-81
09150500	Roubideau Creek at Mouth near Delta, CO	242	1938-54, 1976-83
09152000	Kannah Creek near Whitewater, CO	61.9	1917-82
09152600	Orchard Mesa Drain at Grand Junction, CO	3.70	1973-83
09152650	Leach Creek at Durham, CO	24.8	1973-83
09152900	Adobe Creek near Fruita, CO	15.4	1973-83
09153000	Colorado River near Fruita, CO	17,100	1907-23
09153270	Big Salt Wash at Fruita, CO	142	1973-77
09153300	Reed Wash near Loma, CO	29.3	1973-83
09153330	West Salt Creek near Carbonera, CO	95.6	1979-82
09153400	West Salt Creek near Mack, CO	168	1973-83
09163050	Badger Wash near Mack, CO	6.51	1973-82
09163310	East Salt Creek near Mack, CO	197	1973-82
09163340	Mack Wash near Mack, CO	15.9	1973-82
09163490	Salt Creek near Mack, CO	436	1973-83
09163570	Hay Press Creek above Fruita Reservoir 3 near Glade Park, CO	0.77	1983-88
09166000	West Fork Dolores River near Stoner, CO	162	1941-44
09167000	Lost Canyon Creek at Dolores, CO	73.5	1922-27, 1941-48
09167450	Plateau Creek near Mouth near Dolores, CO	83.0	1982-83
09167500	Dolores River near McPhee, CO	817	1938-52
09168100	Disappointment Creek near Dove Creek, CO	147	1957-86
09168800	Big Gypsum Creek near Slick Rock, CO	43.9	1979-81
09170500	West Paradox Creek near Paradox, CO	23.6	1944-52
09170800	West Paradox Creek above Bedrock, CO	53.3	1971-73
09171000	West Paradox Creek near Bedrock, CO	55.3	1944-52
09171200	San Miguel River near Telluride, CO	42.8	1959-65
09171500	San Miguel River at Fall Creek, CO	167	1895-99, 1910
09172000	Fall Creek near Fall Creek, CO	33.4	1941-59
09172100	Leopard Creek at Noel, CO	9.03	1955-63
09172600	Saltado Creek near Norwood, CO	--	1976-80
09172700	Gurley Ditch near Norwood, CO	--	1976-80
09172800	West Beaver Creek near Norwood, CO	--	1976-80
09173000	Beaver Creek near Norwood, CO	40.6	1941-61, 1962-67, 1975-81
09173500	Horsefly Creek near Sams, CO	28.8	1942-51
09174000	San Miguel River near Nucla, CO	649	1953-62
09174500	Cottonwood Creek near Nucla, CO	38.8	1942-51
09174700	West Naturita Creek at Upper Station near Norwood, CO	7.31	1976-80
09175000	West Naturita Creek near Norwood, CO	53.0	1940-52, 1975-80
09175200	Lilylands Canal near Norwood, CO	--	1976-80
09175400	Maverick Draw near Norwood, CO	41.3	1976-80
09175500	San Miguel River at Naturita, CO	1,069	1917-29, 1940-81
09176500	Tabeguache Creek near Nucla, CO	16.9	1946-53
09177500	Taylor Creek near Gatewat, CO	15.4	1944-67
09178000	Deep Creek near Paradox, CO	4.31	1944-53
09178500	Geyser Creek near Paradox, CO	--	1944-51
09179000	Roc Creek near Urantium CO	75.8	1944-52
09179200	Salt Creek near Gateway, CO	31.2	1979-85
09179500	Dolores River at Gateway, CO	4,347	1936-54
09236000	Bear River near Toponas, CO	23.0	1952-65, 1966-86
09236500	Bear River near Yampa, CO	41.6	1939-44
09237800	Service Creek near Oak Creek, CO	38.2	1965-73
09238000	Oak Creek near Oak Creek, CO	14.0	1952-57
09238300	North Fork Walton Creek near Rabbit Ears Pass, CO	0.71	1972-75
09238350	Fishhook Creek near Rabbit Ears Pass, CO	6.45	1972-75
09238500	Walton Creek near Steamboat Springs, CO	42.4	1920-22, 1965-73, 1978-87
09238700	Fish Creek Tributary above Long Lake near Buffalo Pass, CO	0.43	1984-86
09239400	Spring Creek near Steamboat Springs, CO	6.96	1965-72
09240500	ELK River at Hinman Park, CO	61.0	1911-18
09240800	South Fork Elk River near Clark, CO	33.7	1966-73
09244100	Fish Creek near Milner, CO	216	1955-73
09244300	Grassy Creek near Mount Harris, CO	25.8	1958-66
09244400	Yampa River near Hayden, CO	1,430	1965-72
09244405	Gibralter Canal near Hayden, CO	--	1965-72
09244410	Yampa River below Diversion near Hayden, CO	1,430	1965-86
09244415	Sage Creek above Sage Creek Reservoir near Hayden, CO	4.17	1980-83
09244460	Watering Trough Gulch near Hayden, CO	2.65	1977-81
09244464	Hubberson Gulch near Hayden, CO	8.08	1977-81
09244470	Stokes Gulch near Hayden, CO	13.6	1976-81
09244500	Elkhead Creek near Clark, CO	45.4	1942-44, 1958-73
09245500	North Fork Elkhead Creek near Elkhead, CO	21.0	1910, 1920, 1958-1973
09246500	Elkhead Creek near Craig, CO	249	1906, 1909-18
09246900	Fortification Creek near Craig, CO	34.3	1955-60
09247000	Fortification Creek at Craig, CO	258	1903-06, 1909-18, 1943-47
09247500	Yampa River at Craig, CO	1,730	1901-06, 1909-16

DISCONTINUED GAGING STATIONS--Continued

Station number		Drainage area (sq mi)	Period of record (calendar years)
09248500	East Fork of Williams Fork near Willow Creek, CO	96.0	1943-47
09248600	East Fork of Williams Fork above Willow Creek, CO	108	1956-72
09249000	East Fork of Williams Fork near Pagoda, CO	150	1953-71
09249200	South Fork of Williams Fork near Pagoda, CO	46.7	1965-79
09249450	Waddle Creek near Pagoda, CO	5.24	1985-86
09249455	Deep Rock Gulch near Hamilton, CO	3.53	1985-86
09249500	Williams Fork at Hamilton, CO	341	1904-06, 1909-27
09249700	Morapos Creek near Hamilton, CO	13.7	1965-67
09250000	Milk Creek near Thornburgh, CO	65.0	1952-1986
09250400	Good Spring Creek at Axial, CO	40.0	1975-1978
09250610	Jubb Creek near Axial, CO	7.53	1975-81
09250700	Morgan Gulch near Axial, CO	25.6	1980-81
09251500	Middle Fork Little Snake River near Battle Creek, CO	120	1912-22
09252500	South Fork Little Snake River near Battle Creek, CO	46.0	1912-20
09253500	Battle Creek near Slater, CO	285	1942-51
09254500	Slater Fork at Baxter Ranch near Slater, CO	80.0	1911-20, 1922
09259950	Little Snake River above Lily, CO	--	1950-69
09302400	North Fork White River below Trappers Lake, CO	19.5	1956-65
09302420	North Fork White River above Ripple Creek near Trappers Lake, CO	62.5	1965-73
09302450	Lost Creek near Buford, CO	21.5	1964-89
09302500	Marvine Creek near Buford, CO	59.7	1903-06, 1973-84
09302800	North Fork White River near Buford, CO	220	1903-06, 1956-72
09303340	Patterson Creek near Budges Resort, CO	11.2	1976-77
09304100	Big Beaver Creek near Buford, CO	34.1	1955-64
09304150	Miller Creek near Meeker, CO	57.6	1970-79
09304300	Coal Creek near Meeker, CO	25.1	1957-68
09304600	White River at Meeker, CO	808	1978-85
09305500	Piceance Creek at Rio Blanco. CO	8.97	1952-57
09306015	Middle Fork Stewart Gulch near Rio Blanco, CO	24.0	1974-76, 1977-82
09306022	Stewart Gulch above West Fork near Rio Blanco, CO	44.0	1976-85
09306025	West Fork Stewart Gulch near Rio Blanco, CO	14.2	1974-76, 1977-82
09306028	West Fork Stewart Gulch at Mouth near Rio Blanco, CO	15.7	1974-82
09306033	Sorghum Gulch near Rio Blanco, CO	1.22	1974-76, 1977-82
09306036	Sorghum Gulch at Mouth near Rio Blanco, CO	3.62	1974-86
09306039	Cottonwood Gulch near Rio Blanco, CO	1.20	1974-85
09306045	Piceance Creek below Gardenhire Gulch near Rio Blanco, CO	255	1980-82, 1985
09306050	Scandard Gulch near Rio Blanco, CO	6.61	1974-76, 1978-82
09306052	Scandard Gulch at Mouth near Rio Blanco, CO	7.97	1974-85
09306058	Willow Creek near Rio Blanco, CO	48.4	1974-85
09306061	Piceance Creek above Hunter Creek near Rio Blanco, CO	309	1974-87
09306175	Black Sulphur Creek near Rio Blanco, CO	103	1975-83
09306202	Horse Draw near Rangely, CO	1.47	1977-81
09306203	Horse Draw at Mouth near Rangely, CO	2.87	1977-81
09306230	Stake Springs Draw near Rangely, CO	26.1	1974-77
09306235	Corral Gulch below Water Gulch near Rangely, CO	8.61	1974-89
09306237	Dry Fork near Rangely, CO	2.74	1974-82
09306240	Box Elder Gulch near Rangely, CO	9.21	1974-85
09306241	Box Elder Gulch Tributary near Rangely, CO	2.39	1975-82
09306244	Corral Gulch at 84 Ranch, CO	37.8	1975-77
09306246	Yellow Creek Tributary near 84 Ranch, CO	5.53	1975-77
09306248	Duck Creek at Upper Station near 84 Ranch, CO	39.1	1975-77
09306250	Duck Creek near 84 Ranch, CO	50.0	1975-77
09306300	White River above Rangely, CO	2,773	1972-82
09306380	Douglas Creek at Rangely, CO	425	1976-78
09340000	East Fork San Juan River near Pagosa Springs, CO	86.9	1935-80
09340500	West Fork San Juan River above Borns Lake near Pagosa Springs, CO	41.2	1937-53
09341200	Wolf Creek near Pagosa Springs, CO	14.0	1968-75
09341300	Wolf Creek at Wolf Creek Camp Ground near Pagosa Springs, CO	18.0	1984-87
09341350	Windy Pass Creek near Pagosa Springs, CO	1.41	1984-87
09341500	West Fork San Juan River near Pagosa Springs, CO	87.9	1935-60, 1984-87
09342000	Turkey Creek near Pagosa Springs, CO	23.0	1937-49
09343000	Rio Blanco near Pagosa Springs, CO	58.0	1935-71
09343500	Rito Blanco near Pagosa Springs, CO	23.3	1935-52
09344300	Navajo River above Chromo, CO	96.4	1956-70
09345500	Little Navajo River at Chromo, CO	21.9	1935-52
09347200	Middle Fork Piedra River near Pagosa Springs, CO	32.2	1969-75
09347205	Middle Fork Piedra River near Dyke, CO	34.1	1978-84
09347500	Piedra River at Bridge Ranger Station near Pagosa Springs, CO	82.3	1936-41, 1946-54
09348500	Williams Creek near Bridge Ranger Station near Pagosa Springs, CO	43.7	1936-41, 1946-49
09349000	Weminuche Creek near Bridge Ranger Station near Pagosa Springs, CO	53.4	1936-41, 1946-49
09349500	Piedra River near Piedra, CO	371	1911-12, 1938-73
09353500	Los Pinos River near Bayfield, CO	270	1927-86
09357500	Animas River at Howardsville, CO	55.9	1935-82
09358900	Mineral Creek above Silverton, CO	11.0	1968-75
09359000	Mineral Creek near Silverton, CO	43.9	1935-49
09359100	Lime Creek near Silverton, CO	33.9	1956-61
09359500	Animas River above Tacoma, CO	348	1945-56
09361000	Hermosa Creek near Hermosa, CO	172	1911, 1912-14, 1919-28, 1939-1980
09361200	Falls Creek near Durango, CO	7.18	1959-65
09362000	Lightner Creek near Durango, CO	66.0	1927-49
09362900	Florida River near Hermosa, CO	68.8	1955-63
09363000	Florida River near Durango, CO	97.4	1899, 1901-03, 1910-12, 1917-1924, 1926-60
09363050	Florida River below Florida Farmers Ditch near Durango, CO	107	1967-82
09363100	Salt Creek near Oxford, CO	17.7	1956-63, 1967-83

DISCONTINUED GAGING STATIONS--Continued

Station number		Drainage area (sq mi)	Period of record (calendar years)
09363200	Florida River at Bondad, CO	221	1956-63, 1967-83
09366000	Cherry Creek near Red Mesa, CO	66.0	1928-50
09368500	West Mancos River near Mancos, CO	39.4	1910-11, 1938-53
09369000	East Mancos River near Mancos, CO	11.9	1937-51
09369500	Middle Mancos River near Mancos, CO	12.1	1937-51
09370000	Mancos River near Mancos, CO	71.5	1921, 1931-38
09370800	Mancos River near Cortez, CO	302	1976-79
09370820	Mancos River below Johnson Canyon near Cortez, CO	320	1979-82
09371400	Hartman Draw at Cortez, CO	34.0	1978-86
09371420	McElmo Creek above Alkali Canyon near Cortez, CO	147	1972-86
09371492	Mud Creek at State Highway 32 near Cortez, CO	33.6	1981-86
09371495	Mud Creek near Cortez, CO	33.6	1978-81
09371700	McElmo Creek below Cortez, CO	283	1972-83

DISCONTINUED CONTINUOUS WATER-QUALITY STATIONS

The following stations were discontinued as continuous water-quality stations prior to the 1989 water year. Daily records of temperature, specific conductance, pH, dissolved oxygen or sediment were collected and published for the period of record shown for each station.

Station number	Station name	Drainage area (sq mi)	Type of record	Period of record (water years)
09037500	Williams Fork near Parshall, CO	184	Temp., S.C.	1986-87
09038500	Williams Fork below Williams Fork Reservoir, CO	230	Temp., S.C.	1985-87
09049200	West Tenmile Creek at Copper Mountain, CO	21.0	Sed.	1973-79
09052500	Boulder Creek near Dillon, CO	9.89	Temp., S.C.	1982
09053500	Blue River above Green Mountain Reservoir, CO	511	Temp. S.C.	1986 1986-87
09057500	Blue River below Green Mountain Reservoir, CO	599	Temp., S.C.	1986-87
09060550	Rock Creek at Crater, CO	72.6	Temp., S.C.	1986-87
09066050	Black Gore Creek near Vail, CO	19.6	Sed.	1973-79
09066250	Gore Creek at Vail, CO	57.3	Sed.	1973-79
09070500	Colorado River near Dotsero, CO	4,394	Temp., S.C. Sed.	1980-84 1959-61
09071100	Colorado River near Glenwood Springs, CO	4,560	Temp S.C.	1969-70, 1980-85 1980-85
09072500	Colorado River at Glenwood Springs, CO	4,558	Temp. Sed.	1954-58 1959--61
09073700	Hunter Creek above Midway Creek near Aspen, CO	6.18	Temp., S.C.	1976-77
09085000	Roaring Fork River at Glenwood Springs, CO	1,451	Temp., S.C. Sed.	1980-84 1959-61
09085100	Colorado River below Glenwood Springs, CO	6,013	Temp., S.C.	1980-84
09092850	East Middle Fork Parachute Cr nr Rio Blanco, CO	22.1	Temp., S.C. Sed.	1976-82 1977-82
09092970	East Fork Parachute Creek near Rulison, CO	20.4	Temp. S.C. Sed.	1977-78, 1980-83 1977-83 1978, 1980-83
09093000	Parachute Creek near Parachute, CO	141	Temp., S.C. Sed.	1975-80 1974-75
09093500	Parachute Creek at Parachute, CO	198	Temp., S.C. Sed.	1975-80 1974-82
09093700	Colorado River near De Beque, CO	7,370	Temp., S.C. Sed.	1973-82 1974-76
09095000	Roan Creek near De Beque, CO	321	Temp., S.C. Sed.	1975-80 1975-81
09095530	Government Highline Canal near Mack, CO	--	Temp. S.C.	1973-80 1974-80
09105000	Plateau Creek near Cameo, CO	592	Temp., S.C.	1971-75
09106200	Lewis Wash near Grand Junction, CO	4.72	Temp., S.C.	1973-77
09149500	Uncompahgre River at Delta, CO	1,115	Sed.	1959
09149900	Potter Creek near Columbine Pass, CO	7.10	Temp., S.C.	1981
09149910	Potter Creek near Olathe, CO	26.0	Temp., S.C.	1981
09152600	Orchard Mesa Drain at Grand Junction, CO	3.70	Temp., S.C.	1973-77
09152650	Leach Creek at Durham, CO	24.8	Temp., S.C.	1973-77
09152900	Adobe Creek near Fruita, CO	15.4	Temp., S.C.	1973-80
09153270	Big Salt Wash at Fruita, CO	142	Temp., S.C.	1973-77
09153300	Reed Wash near Loma, CO	29.3	Temp., S.C.	1973-83
09153330	West Salt Creek near Carbonera, CO	95.6	Temp., S.C.	1981-82
09153400	West Salt Creek near Mack, CO	168	Temp., S.C.	1973-84
09160000	Badger Wash Observation Res 4-A near Mack, CO	.02	Temp., S.C.	1981
09160500	Badger Wash Observation Res 12 near Mack, CO	.09	Temp., S.C.	1981-82
09161000	Badger Wash Observation Res 2-A near Mack, CO	.15	Temp., S.C.	1981
09163050	Badger Wash near Mack, CO	6.51	Temp., S.C.	1973-80
09163310	East Salt Creek near Mack, CO	197	Temp., S.C.	1973-82
09163340	Mack Wash near Mack, CO	15.9	Temp. S.C.	1973-82 1974-82
09163490	Salt Creek near Mack, CO	436	Temp., S.C.	1973-83
09168100	Disappointment Creek near Dove Creek, CO	147	Temp., S.C.	1984
09168800	Big Gypsum Creek near Slick Rock, CO	43.9	Temp., S.C.	1981
09171070	Dolores River below W. Paradox Cr nr Bedrock, CO	2,144	Temp., S.C.	1986-87
09179200	Salt Creek near Gateway, CO	31.2	Temp., S.C.	1981-85
09179500	Dolores River at Gateway, CO	4,347	Temp.	1949-52
09237500	Yampa River near Oak Creek, CO	227	Sed.	1985-88
09243700	Middle Creek near Oak Creek, CO	23.5	Temp., S.C.	1976-81
09243900	Foidel Creek at Mouth near Oak Creek, CO	17.5	Temp., S.C. Sed.	1976-81 1978-81
09244415	Sage Creek above Sage Creek Res. near Hayden, CO	4.17	Temp., S.C.	1981-83
09244460	Watering Trough Gulch near Hayden, CO	2.65	Temp., S.C.	1979-81
09244464	Hubberson Gulch near Hayden, CO	8.08	Temp., S.C.	1979-81
09244470	Stokes Gulch near Hayden, CO	13.6	Temp., S.C., Sed.	1978-81
09250400	Good Spring Creek at Axial, CO	40.0	Temp. S.C.	1975-78 1974-78
09250507	Wilson Creek above Taylor Creek near Axial, CO	20.0	Temp., S.C., Sed.	1980-81
09250510	Taylor Creek at Mouth near Axial, CO	7.22	Temp., S.C.	1976-81
09250600	Wilson Creek near Axial, CO	27.4	Temp. S.C. Sed.	1975-80 1974-80 1976-80
09250610	Jubb Creek near Axial, CO	7.53	Temp., S.C.	1976-81
09250700	Morgan Gulch near Axial, CO	25.6	Temp., S.C.	1980-81
09259950	Little Snake River above Lily, CO	3,730	Temp., S.C. Sed.	1950-69 1958-64
09260000	Little Snake River near Lily, CO	3,730	Temp., S.C. Sed.	1975-85 1958-64
09260050	Yampa River at Deerlodge Park, CO	7,660	Temp., S.C.	1977-82
09304200	White River above Coal Creek, near Meeker, CO	648	Temp., S.C.	1978-84
09304500	White River near Meeker, CO	755	Temp., S.C.	1973-74
09304600	White River at Meeker, CO	808	Temp., S.C.	1973-85
09304800	White River below Meeker, CO	1,024	Temp., S.C.	1978-85

DISCONTINUED CONTINUOUS WATER-QUALITY STATIONS--Continued

Station number	Station name	Drainage area (sq mi)	Type of record	Period of record (water years)
09306007	Piceance Creek below Rio Blanco, CO	177	Temp., S.C., Sed	1974-85
09306015	Middle Fork Stewart Gulch near Rio Blanco, CO	24.0	Temp., S.C.	1976, 1981
			Sed.	1976
09306022	Stewart Gulch above West Fork near Rio Blanco, CO	44.0	Temp., S.C., Sed.	1974-82
09306025	West Fork Stewart Gulch near Rio Blanco, CO	14.2	Temp.	1974-1976, 1980-81
			S.C.	1975-76, 1980-81
			Sed.	1974-76
09306028	W.F. Stewart Gulch at Mouth near Rio Blanco, CO	15.7	Temp.	1980-81
			S.C.	1977, 1980-81
			Sed.	1975-76, 1980-81
09306033	Sorghum Gulch near Rio Blanco, CO	1.22	Temp., S.C.	1975-76, 1980
			Sed.	1975-76
09306036	Sorghum Gulch at mouth near Rio Blanco, CO	3.62	Temp., S.C.	1976, 1978, 1980
			Sed.	1975-77, 1982
09306039	Cottonwood Gulch near Rio Blanco, CO	1.20	Temp., S.C.	1976-78, 1980
			Sed.	1974-77, 1980
09306042	Piceance Creek Tributary near Rio Blanco, CO	1.06	Temp., S.C.	1974-86
			Sed.	1974-82
09306045	Piceance Cr bl Gardenhire Gulch nr Rio Blanco, CO	255	Temp., S.C.	1980-81
09306050	Scandard Gulch near Rio Blanco, CO	6.61	Temp., S.C.	1980
			Sed.	1975-76
09306052	Scandard Gulch at Mouth near Rio Blanco, CO	7.97	Temp., S.C.	1976, 1978, 1980
			Sed.	1974-76, 1980
09306058	Willow Creek near Rio Blanco, CO	48.4	Temp., S.C.	1974-82
			pH, D.O.	1976-82
			Sed.	1974-82
09306061	Piceance Creek above Hunter Cr nr Rio Blanco, CO	309	Temp., S.C., Sed.	1974-85
			pH, D.O.	1974-84
09306175	Black Sulphur Creek near Rio Blanco, CO	103	Temp., S.C., Sed.	1975-81
09306200	Piceance Creek below Ryan Gulch nr Rio Blanco, CO	506	Sed.	1972-83
09306202	Horse Draw near Rangely, CO	1.47	Sed.	1980
09306203	Horse Draw at Mouth near Rangely, CO	2.87	Temp., S.C.	1980
			Sed.	1980-81
09306222	Piceance Creek at White River, CO	652	Temp., S.C., Sed.	1974-83
09306230	Stake Springs Draw near Rangely, CO	26.1	Temp., S.C., Sed.	1977
09306235	Corral Gulch below Water Gulch near Rangely, CO	8.61	Temp., S.C.	1975-85
			Sed.	1974-82
09306237	Dry Fork near Rangely, CO	2.74	Temp., S.C.	1977, 1979, 1982
			Sed.	1975, 1977, 1979, 1981-82
09306240	Box Elder Gulch near Rangely, CO	9.21	Temp., S.C.	1975-85
			Sed.	1975-82
09306241	Box Elder Gulch Tributary near Rangely, CO	2.39	Temp.	1976, 1980-81
			S.C.	1976-77, 1981
			Sed.	1975, 1980, 1982
09306242	Corral Gulch near Rangely, CO	31.6	Temp., S.C.	1975-87
			Sed.	1974-85
09306244	Corral Gulch at 84 Ranch, CO	37.8	Temp., S.C. Sed.	1975-77
09306246	Yellow Creek Tributary near 84 Ranch, CO	5.53	Sed.	1976
09306248	Duck Creek at Upper Station near 84 Ranch, CO	39.1	Sed.	1976
09306250	Duck Creek near 84 Ranch, CO	50.0	Temp., S.C.	1977
09306255	Yellow Creek near White River, CO	262	Temp., S.C. Sed.	1974-82
09341350	Windy Pass Creek near Pagosa Springs, CO	1.41	Sed.	1986
09341500	West Fork San Juan River near Pagosa Springs, CO	87.9	Sed.	1985-87
09343000	Rio Blanco near Pagosa Springs, CO	58.0	Sed.	1961-62
09344300	Navajo River above Chromo, CO	96.4	Sed.	1961-62
09352900	Vallecito Creek near Bayfield, CO	72.1	Temp.	1962-82
09370800	Mancos River near Cortez, CO	302	Temp., S.C.	1976-79
09370820	Mancos River below Johnson Canyon nr Cortez, CO	320	Temp., S.C.	1979-82
09371000	Mancos River near Towaoc, CO	526	Sed.	1961
09371400	Hartman Craw at Cortez, CO	34.0	Temp., S.C.	1978-81
09371500	McElmo Creek near Cortez, CO	230	Temp., S.C.	1982-87

Type of record: Temp. (temperature), S.C. (specific conductance), pH (pH), D.O. (dissolved oxygen), Sed. (sediment).

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2-D1. Application of surface geophysics to ground-water investigations, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.

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3-A9. Measurement of time of travel and dispersion in streams by dye tracing, by E. F. Hubbard, F. A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1982. 44 pages.

3-A10. Discharge ratings at gaging stations, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.

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3-A12. Fluorometric procedures for dye tracing, by J. F. Wilson, Jr., E. D. Cobb, and F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 41 pages.

3-A13. Computation of continuous records of streamflow, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.

3-A14. Use of flumes in measuring discharge, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.

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3-B6. The principle of superposition and its application in ground-water hydraulics, by T. E. Reilly, O. L. Franke, and G. D. Bennett: USGS--TWRI Book 3, Chapter B6. 1987. 28 pages.

3-C1. Fluvial sediment concepts, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.

3-C2. Field methods for measurement of fluvial sediment, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.

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4-A1. Some statistical tools in hydrology, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.

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4-D1. Computation of rate and volume of stream depletion by wells, by C. T. Jenkins: USGS-TWRI Book 4, Chapter D1. 1970. 17 pages.

5-A1. Methods for determination of inorganic substances in water and fluvial sediments, by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.

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5-A5. Methods for determination of radioactive substances in water and fluvial sediments, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.

5-A6. Quality assurance practices for the chemical and biological analyses of water and fluvial sediments, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.

5-C1. Laboratory theory and methods for sediment analysis, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.

6-A1. A modular three-dimensional finite-difference ground-water flow model, by M. G. McDonald and A. W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 pages.

7-C1. Finite difference model for aquifer simulation in two dimensions with results of numerical experiments, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.

7-C2. Computer model of two-dimensional solute transport and dispersion in ground water, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.

7-C3. A model for simulation of flow in singular and interconnected channels, by R. W. Schaffrannek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.

8-A1. Methods of measuring water levels in deep wells, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.

8-A2. Installation and service manual for U.S. Geological Survey manometers, by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.

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COLORADO RIVER MAIN STEM

09010500 COLORADO RIVER BELOW BAKER GULCH, NEAR GRAND LAKE, CO

LOCATION.--Lat 40°19'33", long 105°51'22", in NE¼NW¼ sec.12, T.4 N., R.76 W., Grand County, Hydrologic Unit 14010001, on left bank 500 ft downstream from Baker Gulch, 1.0 mi upstream from Bowen Gulch, and 5.5 mi northwest of town of Grand Lake.

DRAINAGE AREA.--53.4 mi^2.

PERIOD OF RECORD.--May 1953 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 8,750 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-5, Nov. 6, 7, 14, Nov. 20 to Apr. 4, Apr. 7-27, May 5-17, Aug. 23-31, and Sept. 2-30. Records fair except for estimated daily discharges, which are poor. Transmountain diversion upstream from station by Grand River ditch (see elsewhere in this report). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--36 years, 63.3 ft^3/s; 45,860 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 976 ft^3/s, June 30, 1957, gage height, 7.19 ft; maximum gage height, 7.30 ft, June 25, 1971; minimum daily discharge, 3.0 ft^3/s, Jan. 13, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 298 ft^3/s at 2200 May 30, gage height, 5.84 ft; minimum daily, 4.8 ft^3/s, Feb. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	8.9	8.4	6.8	5.0	5.6	9.3	43	214	72	32	13
2	16	9.5	8.0	6.8	5.0	5.7	9.6	48	192	70	40	13
3	14	11	8.0	6.8	5.0	5.7	10	47	182	66	34	14
4	14	9.6	8.0	6.8	5.0	5.8	11	42	166	62	31	14
5	14	10	8.0	6.8	4.8	5.8	11	37	157	59	30	15
6	17	10	8.0	6.8	5.0	5.9	11	39	159	54	25	15
7	14	11	8.0	6.8	5.0	6.0	11	44	152	51	22	16
8	13	11	8.0	6.8	5.0	6.0	12	52	165	49	22	17
9	13	11	8.0	6.8	5.0	6.0	12	64	162	46	24	18
10	12	11	8.0	6.8	5.0	6.1	12	75	166	45	24	17
11	12	11	8.0	6.2	5.0	6.2	12	90	184	46	23	15
12	12	10	8.0	6.2	5.0	6.3	13	93	184	47	25	17
13	11	11	8.0	6.2	5.0	6.3	13	82	171	43	26	20
14	11	11	8.0	6.2	5.0	6.4	16	62	163	41	22	18
15	10	11	8.0	6.2	5.0	6.5	20	52	161	37	21	18
16	10	9.1	8.0	6.2	5.0	6.7	24	53	177	33	19	17
17	10	11	8.0	6.2	5.1	6.9	27	80	197	30	21	17
18	10	11	8.0	6.2	5.1	7.0	32	107	171	28	24	17
19	11	11	8.0	6.2	5.1	7.1	36	141	168	27	21	18
20	12	11	8.0	6.2	5.1	7.2	40	149	171	25	24	18
21	12	10	7.5	5.6	5.1	7.4	48	163	155	25	22	19
22	11	10	7.4	5.6	5.2	7.5	55	168	120	26	20	19
23	11	10	7.4	5.6	5.2	7.6	63	200	105	37	19	19
24	11	10	7.4	5.6	5.3	7.7	75	205	94	33	18	18
25	10	10	7.4	5.6	5.4	7.9	81	176	88	31	18	17
26	10	9.7	7.4	5.6	5.4	8.0	82	145	85	27	17	17
27	9.7	9.4	7.4	5.6	5.5	8.2	79	146	84	24	16	17
28	9.0	9.2	7.4	5.6	5.6	8.4	76	176	82	26	15	16
29	9.3	9.0	7.4	5.6	---	8.6	64	216	80	75	15	15
30	9.9	9.0	7.4	5.6	---	8.8	52	260	75	62	14	15
31	9.1	---	7.4	5.6	---	9.0	---	249	---	38	14	---
TOTAL	367.0	306.4	241.9	191.6	142.9	214.3	1016.9	3504	4430	1335	698	499
MEAN	11.8	10.2	7.80	6.18	5.10	6.91	33.9	113	148	43.1	22.5	16.6
MAX	19	11	8.4	6.8	5.6	9.0	82	260	214	75	40	20
MIN	9.0	8.9	7.4	5.6	4.8	5.6	9.3	37	75	24	14	13
AC-FT	728	608	480	380	283	425	2020	6950	8790	2650	1380	990

CAL YR 1988 TOTAL 20529.7 MEAN 56.1 MAX 559 MIN 6.4 AC-FT 40720
WTR YR 1989 TOTAL 12947.0 MEAN 35.5 MAX 260 MIN 4.8 AC-FT 25680

09013000 ALVA B. ADAMS TUNNEL AT EAST PORTAL, NEAR ESTES PARK, CO

LOCATION.--Lat 40°19'40", long 105°34'39", in SW¼NW¼ sec.9, T.4 N., R.73 W., Larimer County, Hydrologic Unit 10190006, on right bank at upstream end of Aspen Creek siphon, 700 ft downstream from east portal, and 4.5 mi southwest of Estes Park.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1946 to current year (monthly discharge only for August and September 1947).

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 8,250 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1950, water-stage recorder and Parshall flume at different datum. Oct. 1, 1950, to Sept. 30, 1952, water-stage recorder and Cippoletti weir at different datum.

REMARKS.--No estimated daily discharges. Records excellent. This is a transmountain diversion from Grand Lake and Shadow Mountain Lake for power and irrigation developments in the South Platte River basin as part of the Colorado-Big Thompson project. Diversion point is at west portal near town of Grand Lake, 13.35 mi west of east portal.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--43 years, 284 ft³/s; 205,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 592 ft³/s, June 30, 1962; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	379	546	370	394	431	238	46	368	253	420	548	548
2	380	549	388	395	498	238	.76	382	251	419	548	547
3	383	419	388	394	494	238	1.3	382	340	419	549	548
4	381	479	391	392	494	238	4.0	388	337	419	548	548
5	385	390	391	387	494	238	264	384	345	423	548	547
6	382	390	388	389	492	238	269	382	335	446	551	548
7	372	390	393	390	483	238	310	392	332	522	547	540
8	405	391	393	394	444	237	359	392	334	523	546	541
9	404	368	396	390	448	237	357	335	348	523	545	543
10	407	373	395	392	448	213	357	189	337	523	544	541
11	404	370	390	397	449	186	359	156	338	522	546	540
12	316	374	398	452	449	185	368	190	195	522	545	541
13	316	364	391	449	443	185	380	189	266	522	545	542
14	318	368	394	397	364	186	226	190	265	522	546	540
15	336	369	396	394	333	186	165	257	308	523	546	539
16	335	369	393	398	335	186	13	254	330	523	545	515
17	335	371	401	397	274	185	18	265	121	523	546	499
18	336	370	397	401	240	185	18	442	253	525	549	499
19	335	369	394	400	239	185	17	418	250	534	549	499
20	432	371	393	403	239	190	16	336	105	547	549	498
21	491	374	341	373	239	203	16	340	218	546	549	499
22	491	376	553	401	240	203	16	346	325	550	547	503
23	493	380	529	399	237	204	16	340	334	550	547	502
24	496	380	398	374	238	203	19	335	453	548	546	502
25	533	380	396	340	240	203	14	251	468	549	549	500
26	534	375	395	375	240	203	8.6	345	457	551	550	522
27	534	376	399	374	240	203	121	382	404	549	551	525
28	540	373	396	393	238	201	395	386	409	547	552	361
29	549	382	404	409	---	198	396	388	370	446	550	408
30	550	374	397	408	---	336	394	276	428	197	548	505
31	548	---	394	404	---	305	---	199	---	418	548	---
TOTAL	13100	11760	12442	12255	10008	6674	4943.66	9879	9509	15351	16977	15490
MEAN	423	392	401	395	357	215	165	319	317	495	548	516
MAX	550	549	553	452	498	336	396	442	468	551	552	548
MIN	316	364	341	340	237	185	.76	156	105	197	544	361
AC-FT	25980	23330	24680	24310	19850	13240	9810	19590	18860	30450	33670	30720

CAL YR 1988 TOTAL 144797.50 MEAN 396 MAX 553 MIN .00 AC-FT 287200
WTR YR 1989 TOTAL 138388.66 MEAN 379 MAX 553 MIN .76 AC-FT 274500

09013000 ALVA B. ADAMS TUNNEL AT EAST PORTAL, NEAR ESTES PARK, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1970 to current year.

REMARKS.--Field data collected prior to 1974 water year are available in district office.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)
OCT												
03...	1130	531	49	8.2	11.5	9.8	21	6.3	1.2	1.9	0.2	0.7
NOV												
01...	1220	548	51	8.1	9.0	8.3	21	6.3	1.2	2.1	0.2	0.9
DEC												
05...	1120	548	50	8.2	5.0	8.4	21	6.4	1.2	2.0	0.2	0.8
JAN												
10...	0930	553	56	7.5	4.5	8.4	25	7.5	1.5	2.4	0.2	0.9
MAR												
13...	1300	185	65	7.4	5.0	8.7	26	8.0	1.4	2.5	0.2	0.9
MAY												
03...	1120	489	51	7.3	6.0	7.9	22	6.7	1.3	2.1	0.2	0.8
JUL												
10...	1225	525	35	8.2	17.5	8.0	14	4.3	0.76	1.7	0.2	0.4
SEP												
14...	0915	542	53	8.2	13.5	7.6	23	6.9	1.4	2.1	0.2	0.6

DATE	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT											
03...	22	4.3	0.4	0.1	4.0	--	32	0.04	46.1	--	<0.10
NOV											
01...	22	4.5	0.4	0.1	4.3	--	33	0.05	48.8	--	<0.10
DEC											
05...	23	4.7	0.5	0.1	4.3	--	34	0.05	50.7	--	<0.10
JAN											
10...	26	4.8	0.4	0.1	4.7	42	38	0.06	62.7	<0.01	--
MAR											
13...	26	4.2	0.4	0.2	5.1	34	39	0.05	17.0	<0.01	--
MAY											
03...	23	3.0	0.4	0.2	4.8	38	33	0.05	50.2	<0.01	--
JUL											
10...	14	2.0	0.3	0.1	3.7	16	22	0.02	22.7	<0.01	--
SEP											
14...	24	3.0	0.3	0.1	4.0	40	33	0.05	58.5	<0.01	--

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	PHOS-PHOROUS ORGANIC TOTAL (MG/L AS P)	PHOS-PHOROUS ORGANIC DIS-SOLVED (MG/L AS P)
OCT											
03...	<0.10	--	--	--	0.3	0.01	0.01	--	--	0.01	0.01
NOV											
01...	<0.10	--	--	--	0.5	0.02	0.02	--	--	0.02	0.02
DEC											
05...	0.10	--	--	--	0.3	0.01	0.03	--	--	0.01	0.03
JAN											
10...	<0.10	0.02	0.02	0.38	0.4	0.01	<0.01	<0.01	--	0.01	--
MAR											
13...	0.11	0.01	<0.01	--	<0.2	<0.01	0.02	0.01	0.03	--	0.01
MAY											
03...	<0.10	0.03	0.01	0.37	0.4	0.01	0.01	0.01	0.03	0.01	0.0
JUL											
10...	<0.10	0.02	0.01	0.58	0.6	0.01	<0.01	0.01	0.03	0.01	--
SEP											
14...	<0.10	0.01	0.02	0.29	0.3	0.10	--	--	--	0.1	--

09013000 ALVA B. ADAMS TUNNEL AT EAST PORTAL, NEAR ESTES PARK, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 03...	1130	--	--	--	<1	--	--	1	23
NOV 01...	1220	--	--	--	--	--	--	--	17
DEC 05...	1120	--	--	--	--	--	--	--	19
JAN 10...	0930	7	0.8	<10	1	7	<3	<10	20
MAR 13...	1300	8	<0.5	<10	<1	<5	<3	<10	21
MAY 03...	1120	6	<0.5	<10	<1	<5	<3	<10	30
JUL 10...	1225	3	<0.5	<10	<1	<5	<3	<10	32
SEP 14...	0915	5	<0.5	<10	<1	<5	<3	<10	20

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 03...	<5	--	2	--	1	--	--	--	4
NOV 01...	--	--	2	--	--	--	--	--	--
DEC 05...	--	--	2	--	--	--	--	--	--
JAN 10...	<10	4	3	<10	<10	--	45	<6	6
MAR 13...	<10	<4	2	<10	<10	<1.0	48	<6	9
MAY 03...	<10	<4	2	<10	<10	2.0	40	<6	10
JUL 10...	<10	<4	2	<10	<10	<1.0	25	<6	8
SEP 14...	--	<4	1	<10	<10	2.0	42	<6	8

09014500 SHADOW MOUNTAIN LAKE NEAR GRAND LAKE, CO

LOCATION.--Lat 40°12'26", long 105°50'27", in SW¼NW¼ sec.19, T.3 N., R.75 W., Grand County, Hydrologic Unit 14010001, in gate house on left side of outlet gates near center of Shadow Mountain Dam on Colorado River, 1.0 mi upstream from Pole Creek and 3.2 mi south of town of Grand Lake.

DRAINAGE AREA.--185 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1947 to current year. Prior to October 1960, published as Shadow Mountain Reservoir near Grand Lake.

REVISED RECORDS.--WSP 1149: 1947-48. WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above National Geodetic Vertical Datum of 1929. Supplementary water-stage recorder on Grand Lake, 800 ft north of outlet gates and 2.9 mi north of Shadow Mountain Dam.

REMARKS.--Lake is formed by earth and rockfill dam and dikes. Storage began in April 1947. Capacity, 17,860 acre-ft, including usable capacity of Grand Lake above elevation 8,365 ft, between elevation 8,347 ft, sill of outlet gate, and 8,367 ft, maximum water surface. Dead storage in Shadow Mountain Lake, 506 acre-ft. Dead storage in Grand Lake not determined. Shadow Mountain Lake is used for stabilization of water level in Grand Lake. Usable capacity for diversion through Alva B. Adams tunnel, 3,660 acre-ft between elevations 8,365 ft, crest of tunnel inlet and 8,367 ft, maximum water surface. Figures given represent usable contents as determined from summation of individual contents of Grand Lake and Shadow Mountain Lake. Transmountain diversion from Colorado River basin, including water pumped from Lake Granby, is effected through Grand Lake and Alva B. Adams tunnel, for power and irrigation in South Platte River basin.

COOPERATION.--Records provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 17,920 acre-ft, May 22, 1955, elevation, 8,367.03 ft; minimum since appreciable storage was first attained, 2,630 acre-ft, May 14, 1948.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 17,600 acre-ft, July 30, elevation, 8,366.86 ft; minimum, 16,480 acre-ft, May 5, elevation, 8,366.26 ft.

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	8,366.77	17,400	-
Oct. 31.	8,366.81	17,480	+80
Nov. 30.	8,366.68	17,250	-230
Dec. 31.	8,366.66	17,220	-30
CAL YR 1988			+10
Jan. 31.	8,366.73	17,320	+100
Feb. 28.	8,366.74	17,360	+40
Mar. 31.	8,366.63	17,180	-180
Apr. 30.	8,366.43	16,810	-370
May 31.	8,366.61	17,180	+370
June 30.	8,366.76	17,400	+220
July 31.	8,366.81	17,450	+50
Aug. 31.	8,366.74	17,320	-130
Sept. 30.	8,366.75	17,350	+30
WTR YR 1989			-50

09014500 SHADOW MOUNTAIN LAKE NEAR GRAND LAKE, CO--Continued

PERIOD OF RECORD.--May to Sept. 1989.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)
MAY						
24...	0840	0.1	60	7.3	11.5	7.4
24...	0841	5.0	60	7.3	11.5	7.4
24...	0842	10.0	60	7.3	11.5	7.4
24...	0843	15.0	61	7.3	11.0	7.3
24...	0844	20.0	60	7.2	10.5	6.7
24...	0845	25.0	62	7.0	9.0	5.3
24...	0846	28.0	63	6.8	8.5	4.2
JUL						
25...	1350	0.1	51	8.7	18.5	6.8
25...	1351	5.0	54	8.1	14.5	5.2
25...	1352	10.0	53	7.8	12.0	4.2
25...	1353	20.0	53	7.6	11.5	3.7
25...	1354	25.0	53	7.4	11.5	2.0
SEP						
20...	1422	0.1	61	7.1	12.5	3.5
20...	1423	5.0	61	7.1	12.5	3.5
20...	1424	10.0	61	7.1	12.0	3.4
20...	1425	20.0	62	7.1	12.0	3.0
20...	1426	25.0	63	7.1	11.0	2.2

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (IN)	OXYGEN, DISSOLVED (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
MAY												
24...	0900	0.1	60	7.3	11.5	93.0	7.4	K<1	23	7.0	1.4	2.4
24...	0910	28.0	63	6.8	8.5	--	4.2	--	25	7.5	1.6	2.1
JUL												
25...	1400	0.1	51	8.7	18.5	89.0	6.8	K<1	24	7.3	1.4	2.2
25...	1415	25.0	53	7.4	11.5	--	2.0	--	25	7.8	1.3	2.4
SEP												
20...	1445	0.1	61	7.1	12.5	83.0	3.5	K<1	26	7.9	1.4	2.6
20...	1500	25.0	63	7.1	11.0	--	2.2	--	25	8.0	1.3	2.7

DATE	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)
MAY											
24...	18	0.2	1.0	24	4.0	0.30	0.20	5.4	40	36	<0.01
24...	15	0.2	0.80	25	4.0	0.40	0.20	6.2	43	38	<0.01
JUL											
25...	16	0.2	0.70	26	3.0	0.30	0.10	4.5	50	35	<0.01
25...	17	0.2	0.70	26	3.0	0.50	0.10	4.9	51	36	<0.01
SEP											
20...	18	0.2	0.60	27	3.0	0.40	0.10	4.8	45	37	<0.01
20...	18	0.2	0.60	27	3.0	0.30	0.10	5.1	40	37	<0.01

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	CHLOR-A PHYTOPLANKTON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTOPLANKTON CHROMO FLUOROM (UG/L)
MAY										
24...	<0.10	<0.01	0.01	--	0.40	0.02	<0.01	<0.01	2.30	<0.10
24...	<0.10	<0.01	<0.01	--	0.30	0.02	0.01	<0.01	--	--
JUL										
25...	<0.10	0.04	<0.01	0.26	0.30	<0.01	<0.01	<0.01	13.0	<0.30
25...	<0.10	0.06	<0.01	--	<0.20	0.01	<0.01	<0.01	--	--
SEP										
20...	<0.10	0.01	0.02	0.29	0.30	<0.01	<0.01	<0.01	3.80	<0.10
20...	<0.10	0.02	0.03	0.18	0.20	0.02	<0.01	<0.01	--	--

K BASED ON NON-IDEAL COUNT.

09014500 SHADOW MOUNTAIN LAKE NEAR GRAND LAKE, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
MAY									
24...	0900	7	<0.5	20	<1	<5	<3	<10	94
24...	0910	9	<0.5	<10	<1	<5	<3	<10	35
JUL									
25...	1400	6	<0.5	<10	<1	<5	<3	<10	51
25...	1415	7	<0.5	20	<1	<5	<3	<10	20
SEP									
20...	1445	8	<0.5	<10	1	<5	<3	<10	16
20...	1500	7	<0.5	<10	<1	<5	<3	<10	13

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	LITHIUM DIS-SOLVED (UG/L AS LI)
MAY									
24...	<10	3	<10	<10	<1.0	39	<6	7	<4
24...	10	59	<10	<10	--	45	<6	<3	<4
JUL									
25...	<10	3	<10	<10	3.0	43	<6	5	<4
25...	<10	8	<10	<10	<1.0	45	<6	5	<4
SEP									
20...	<10	4	<10	<10	<1.0	49	<6	4	<4
20...	<10	20	<10	<10	<1.0	49	<6	5	<4

09018300 GRANBY PUMP CANAL NEAR GRAND LAKE, CO

LOCATION.--Lat 40°12'25", long 105°50'56", in SW¼NE¼ sec.24, T. 3 N., R.76 W., Grand County, Hydrologic Unit 14010001, at road crossing at south end of Shadow Mountain Lake, 4 mi southwest of Grand Lake, and 13.5 mi northeast of Granby.

PERIOD OF RECORD.--September 1970 to September 1975, March 1978 to current year.

REMARKS.--No flow at time of visit for Dec., Jan., Mar., Apr., May, June, and Aug. of the 1989 water year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	COLI-FORM, TOTAL, IMMED. MEM.FIL (COLS./ 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT 26...	1720	200	53	8.3	14.0	7.3	<1	<1	--	--	--	--
NOV 29...	0715	400	56	7.3	3.5	--	<1	K4	--	--	--	--
FEB 14...	0710	200	52	7.8	1.0	--	--	--	25	7.8	1.4	2.4
JUL 21...	0740	200	59	7.7	9.0	4.9	--	--	22	6.9	1.2	2.0
SEP 01...	0730	400	61	7.6	10.0	--	--	--	25	7.8	1.4	2.4
21...	1730	450	59	8.2	12.5	4.7	--	--	26	8.1	1.4	2.6

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)
OCT 26...	--	--	--	--	--	--	--	--	--	--	--
NOV 29...	--	--	--	--	--	--	--	--	--	--	--
FEB 14...	0.2	0.8	26	5.4	0.3	0.1	4.5	39	0.07	29.2	<0.01
JUL 21...	0.2	0.8	26	3.0	0.4	0.1	4.3	34	0.04	17.3	<0.01
SEP 01...	0.2	0.7	26	5.0	0.4	0.1	5.3	39	0.07	54.0	<0.01
21...	0.2	0.6	27	3.0	0.4	0.1	5.1	38	0.05	41.3	<0.01

DATE	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORGANIC TOTAL (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORGANIC DIS-SOLVED (MG/L AS P)
OCT 26...	0.4	--	--	--	--	--	0.02	--	0.02	--	--
NOV 29...	0.4	--	--	--	--	--	0.01	--	0.01	--	--
FEB 14...	0.4	0.13	<0.01	<0.01	--	0.03	0.02	0.02	0.02	0.01	0.01
JUL 21...	0.6	<0.10	<0.01	<0.01	--	--	0.01	<0.01	0.01	<0.01	--
SEP 01...	<0.2	0.11	0.01	<0.01	--	--	0.02	<0.01	0.02	<0.01	--
21...	0.4	<0.10	0.02	0.01	0.38	--	0.02	<0.01	0.02	<0.01	--

K BASED ON NON-IDEAL COLONY COUNT.

09018300 GRANBY PUMP CANAL NEAR GRAND LAKE, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT								
26...	--	--	2	--	--	10	--	<5
NOV								
29...	--	--	<1	--	--	5	--	<5
FEB								
14...	8	<0.5	<1	<5	<3	<10	11	<10
JUL								
21...	7	<0.5	<1	<5	<3	<10	24	<10
SEP								
01...	6	<0.5	<1	<5	<3	<10	20	<10
21...	7	<0.5	<1	<5	<3	<10	21	<10

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	LITHIUM DIS- SOLVED (UG/L AS LI)
OCT								
26...	--	--	3	--	--	--	20	--
NOV								
29...	--	--	3	--	--	--	<10	--
FEB								
14...	1	<10	<10	<1.0	49	<6	4	<4
JUL								
21...	6	<10	<10	<1.0	44	<6	5	<4
SEP								
01...	--	<10	<10	<1.0	49	<6	3	<4
21...	8	<10	<10	<1.0	49	<6	12	<4

09018500 LAKE GRANBY NEAR GRANBY, CO

LOCATION.--Lat 40°10'55", long 105°52'14", in NW¼NE¼ sec.35, T.3 N., R.76 W., Grand County, Hydrologic Unit 14010001, in Granby pumping plant at north shore of lake, 2.5 mi north of Granby Dam on Colorado River and 7.5 mi northeast of Granby.

DRAINAGE AREA.--312 mi^2.

RESERVOIR ELEVATIONS AND CONTENTS RECORDS

PERIOD OF RECORD.--October 1949 to current year. Prior to October 1955, published as Granby Reservoir near Granby.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above National Geodetic Vertical Datum of 1929. Prior to Apr. 9, 1951, nonrecording gage at dam at present datum.

REMARKS.--Lake is formed by earthfill dam and dikes. Regulation began Sept. 13, 1949, and usable storage began June 14, 1950, while dam was under construction. Usable capacity, 465,600 acre-ft, between elevations 8,186.00 ft, trash rack sill at outlet, and 8,280.00 ft, top of radial spillway gates. Dead storage, 74,190 acre-ft. Figures given represent usable contents. Lake is used to store water for pumping to Shadow Mountain Lake for transmountain diversion through Alva B. Adams tunnel for, power and irrigation in South Platte River basin.

COOPERATION.--Records provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 465,900 acre-ft, July 13, 1962, elevation, 8,280.05 ft; minimum since appreciable storage was attained, 13,070 acre-ft, Apr. 16, 1978, elevation, 8,190.93 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 350,500 acre-ft, Oct. 1, elevation, 8,263.29 ft; minimum, 227,000 acre-ft, Sept. 30, elevation, 8,242.58 ft.

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	8,263.39	351,200	-
Oct. 31	8,259.33	325,300	-25,900
Nov. 30	8,256.16	305,700	-19,600
Dec. 31	8,252.31	282,500	-23,200
CAL YR 1988	-	-	-42,200
Jan. 31	8,248.42	259,800	-22,700
Feb. 28	8,245.27	241,900	-17,900
Mar. 31	8,243.41	231,600	-10,300
Apr. 30	8,245.24	241,700	+10,100
May 31	8,250.02	269,100	+27,400
June 30	8,255.07	299,100	+30,000
July 31	8,251.86	279,800	-19,300
Aug. 31	8,247.82	256,400	-23,400
Sept. 30	8,242.58	227,000	-29,400
WTR YR 1989	-	-	-124,200

09018500 LAKE GRANBY NEAR GRANBY, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1973 to June 1975, June 1979, June 1980, July 1981, June 1982, July 1983, June 1984, July 1985, July 1986, July 1987, July 1988, and May 1989 to Sept. 1989.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)
MAY						
24...	1201	0.1	63	7.7	9.0	9.1
24...	1202	5.0	62	7.7	9.0	9.0
24...	1203	10.0	63	7.7	8.5	9.0
24...	1204	20.0	62	7.7	8.0	8.9
24...	1205	25.0	62	7.6	8.0	8.8
24...	1206	30.0	63	7.6	8.0	8.7
24...	1207	40.0	61	7.5	7.0	8.4
24...	1208	50.0	60	7.3	6.0	8.1
24...	1209	60.0	61	7.3	6.0	7.9
24...	1210	70.0	60	7.2	5.5	7.5
24...	1211	75.0	61	7.2	5.5	7.5
24...	1212	80.0	60	7.2	5.0	7.4
24...	1213	90.0	60	7.1	5.0	7.2
24...	1214	100	60	7.1	5.0	7.1
24...	1215	110	61	7.1	5.0	7.1
24...	1216	114	61	7.1	5.0	7.0
JUL						
26...	1035	0.1	59	8.5	18.5	7.9
26...	1036	5.0	59	8.5	18.5	8.0
26...	1037	10.0	60	8.5	18.5	7.6
26...	1038	20.0	61	8.5	18.0	7.9
26...	1039	25.0	61	8.4	18.0	7.2
26...	1040	30.0	62	8.0	17.5	6.6
26...	1041	40.0	63	7.6	15.5	5.4
26...	1042	50.0	58	7.5	10.5	2.6
26...	1043	60.0	59	7.4	8.5	2.0
26...	1044	70.0	58	7.3	8.0	2.0
26...	1045	75.0	58	7.2	8.0	2.1
26...	1046	80.0	58	7.2	7.5	1.9
26...	1047	90.0	57	7.2	7.5	1.9
26...	1048	100	58	7.2	7.5	1.9
26...	1049	110	58	7.2	7.5	1.9
26...	1050	120	58	7.2	7.5	1.9
26...	1051	125	59	7.1	7.5	1.7
26...	1052	130	60	7.1	7.5	1.8
26...	1053	140	60	7.1	7.5	1.6
26...	1054	150	60	7.1	7.5	1.5
SEP						
21...	1045	0.1	53	8.1	14.0	8.3
21...	1046	5.0	53	8.1	14.0	7.7
21...	1047	10.0	54	8.1	14.0	7.4
21...	1048	20.0	55	8.1	14.0	7.4
21...	1049	25.0	56	8.1	14.0	7.3
21...	1050	30.0	52	8.1	14.0	7.3
21...	1051	40.0	56	8.1	14.0	7.1
21...	1052	50.0	56	7.5	13.5	5.0
21...	1053	60.0	54	7.2	9.5	0
21...	1054	70.0	53	7.0	8.5	0
21...	1055	75.0	54	7.0	8.0	0
21...	1056	80.0	53	6.8	8.0	0
21...	1057	90.0	53	6.8	8.0	0
21...	1058	100	54	6.8	8.0	0
21...	1059	110	54	6.8	8.0	0
21...	1100	120	54	6.7	8.0	0

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (IN)	OXYGEN, DISSOLVED (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
MAY												
24...	1220	0.10	63	7.7	9.0	77.0	9.1	K1	26	7.9	1.5	2.5
24...	1230	114	61	7.1	5.0	--	7.0	--	25	7.7	1.5	2.3
JUL												
26...	1100	0.10	59	8.5	18.5	88.0	7.9	K<1	25	7.7	1.3	2.3
26...	1115	150	60	7.1	7.5	--	1.5	--	26	7.9	1.4	2.4
SEP												
21...	1110	0.10	53	8.1	14.0	72.0	8.3	K<1	26	8.0	1.4	2.6
21...	1125	120	54	6.7	8.0	--	0	--	25	7.8	1.4	2.6

K BASED ON NON-IDEAL COLONY COUNT.

09018500 LAKE GRANBY NEAR GRANBY, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)
MAY											
24...	17	0.2	0.80	27	4.0	0.30	0.20	4.8	49	38	<0.01
24...	16	0.2	0.70	26	3.0	0.30	0.20	4.8	40	36	<0.01
JUL											
26...	16	0.2	0.70	27	3.0	0.40	0.10	4.0	51	36	<0.01
26...	16	0.2	0.80	26	3.0	0.40	0.10	5.1	44	37	<0.01
SEP											
21...	18	0.2	0.60	27	3.0	0.40	0.10	4.0	41	36	<0.01
21...	18	0.2	0.70	26	3.0	0.30	0.10	5.5	24	38	<0.01

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORGANIC TOTAL (MG/L AS P)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)
MAY											
24...	<0.10	<0.01	0.01	--	<0.20	<0.01	<0.01	<0.01	--	3.60	0.20
24...	<0.10	0.03	0.03	--	<0.20	0.01	<0.01	<0.01	0.01	--	--
JUL											
26...	<0.10	0.05	0.01	--	<0.20	<0.01	<0.01	<0.01	--	3.90	<0.10
26...	<0.10	0.04	<0.01	--	<0.20	<0.01	<0.01	<0.01	--	--	--
SEP											
21...	<0.10	0.02	0.02	0.28	0.30	<0.01	<0.01	<0.01	--	13.0	<0.10
21...	0.14	<0.01	0.01	--	0.20	0.02	<0.01	<0.01	0.02	--	--

DATE	TIME	BARIUM, DIS-SOLVED (UG/L AS BA) (01 05)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01 10)	BORON, DIS-SOLVED (UG/L AS B) (01 20)	CADMIUM DIS-SOLVED (UG/L AS CD) (01 25)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01 30)	COBALT, DIS-SOLVED (UG/L AS CO) (01 35)	COPPER, DIS-SOLVED (UG/L AS CU) (01 40)	IRON, DIS-SOLVED (UG/L AS FE) (01 46)
MAY									
24...	1220	8	<0.5	<10	<1	<5	<3	<10	12
24...	1230	8	<0.5	<10	<1	<5	<3	<10	11
JUL									
26...	1100	7	<0.5	<10	<1	<5	<3	<10	7
26...	1115	8	<0.5	<10	<1	<5	<3	<10	17
SEP									
21...	1110	8	<0.5	20	<1	<5	<3	<10	10
21...	1125	6	<0.5	<10	<1	<5	<3	<10	6

DATE	LEAD, DIS-SOLVED (UG/L AS PB) (01 49)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01 56)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01 60)	NICKEL, DIS-SOLVED (UG/L AS NI) (01 65)	SILVER, DIS-SOLVED (UG/L AS AG) (01 75)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01 80)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01 85)	ZINC, DIS-SOLVED (UG/L AS ZN) (01 90)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)
MAY									
24...	<10	<1	<10	<10	<1.0	50	<6	<3	<4
24...	<10	<1	<10	<10	6.0	48	<6	<3	<4
JUL									
26...	<10	<1	<10	<10	2.0	45	<6	<3	<4
26...	<10	10	<10	<10	<1.0	48	<6	8	<4
SEP									
21...	<10	1	<10	<10	<1.0	48	<6	3	<4
21...	<10	4	<10	<10	<1.0	49	<6	<3	<4

400844105530800 LAKE GRANBY NEAR GRANBY, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1989 to Sept. 1989.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)
MAY						
24...	1120	0.1	67	7.4	7.5	8.2
24...	1121	5.0	67	7.4	7.0	8.1
24...	1122	10.0	67	7.4	7.0	8.1
24...	1123	20.0	66	7.4	6.5	8.0
24...	1124	25.0	63	7.3	6.5	7.9
24...	1125	30.0	63	7.3	6.5	7.9
24...	1126	40.0	62	7.3	6.0	7.6
24...	1127	45.0	62	7.2	6.0	7.5
JUL						
26...	0945	0.1	59	8.5	18.0	7.9
26...	0946	5.0	59	8.5	18.0	7.9
26...	0947	10.0	59	8.5	18.0	7.8
26...	0948	20.0	59	8.5	18.0	7.4
26...	0949	25.0	58	8.4	18.0	7.2
26...	0950	30.0	58	8.0	17.0	6.9
26...	0951	40.0	57	7.6	14.5	4.6
SEP						
21...	1005	0.1	53	8.0	14.0	7.5
21...	1006	5.0	53	7.9	13.5	7.6
21...	1007	10.0	54	8.0	14.0	7.4
21...	1008	20.0	53	8.0	14.0	7.3
21...	1009	25.0	53	8.0	14.0	7.3
21...	1010	30.0	52	8.0	14.0	7.2
21...	1011	40.0	52	8.0	14.0	7.0

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (IN)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
MAY												
24...	1130	0.1	67	7.4	7.5	75.0	8.2	K2	28	8.4	1.7	2.9
24...	1145	45.0	62	7.2	6.0	--	7.5	--	28	8.2	1.7	2.5
JUL												
26...	1000	0.1	59	8.5	18.0	70.0	7.9	K<1	26	8.1	1.4	2.4
26...	1015	40.0	59	7.6	14.5	--	4.6	--	26	8.2	1.4	2.5
SEP												
21...	1020	40.0	52	8.0	14.0	--	7.0	--	26	8.0	1.4	2.5
21...	1035	0.1	53	8.0	14.0	67.0	7.5	K<1	25	8.0	1.3	2.6

DATE	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)
MAY											
24...	18	0.2	0.70	29	4.0	0.40	0.20	6.3	49	42	<0.01
24...	16	0.2	0.70	27	3.0	0.30	0.20	5.0	39	38	<0.01
JUL											
26...	16	0.2	0.80	27	3.0	0.40	0.10	4.1	71	37	<0.01
26...	17	0.2	0.80	27	3.0	0.40	0.10	4.7	67	37	<0.01
SEP											
21...	17	0.2	0.60	27	3.0	0.40	0.10	4.3	34	37	<0.01
21...	18	0.2	0.70	27	4.0	0.40	0.10	4.1	40	38	<0.01

K BASED ON NON-IDEAL COLONY COUNT.

400844105530800 LAKE GRANBY NEAR GRANBY, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	PHOSPHOROUS ORGANIC TOTAL (MG/L AS P)	CHLOR-A PHYTOPLANKTON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTOPLANKTON CHROMO FLUOROM (UG/L)
MAY											
24...	<0.10	<0.01	0.02	--	0.30	0.01	<0.01	<0.01	0.01	4.7	0.30
24...	<0.10	0.02	0.02	0.28	0.30	0.01	<0.01	<0.01	0.01	--	--
JUL											
26...	<0.10	0.04	0.01	0.16	0.20	<0.01	<0.01	<0.01	--	4.7	<0.10
26...	<0.10	0.04	<0.01	--	<0.20	<0.01	<0.01	<0.01	--	--	--
SEP											
21...	<0.10	0.03	0.04	0.27	0.30	<0.01	<0.01	0.01	--	--	--
21...	<0.10	0.02	0.05	0.28	0.30	<0.01	<0.01	0.02	--	12.0	<0.10

DATE	TIME	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	BORON, DISSOLVED (UG/L AS B)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
MAY									
24...	1130	9	<0.5	<10	<1	<5	<3	<10	20
24...	1145	8	<0.5	<10	<1	<5	<3	<10	12
JUL									
26...	1000	8	<0.5	20	<1	<5	<3	<10	13
26...	1015	9	<0.5	<10	<1	<5	<3	<10	16
SEP									
21...	1020	8	<0.5	<10	<1	<5	<3	<10	5
21...	1035	8	<0.5	<10	<1	<5	<3	<10	11

DATE	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	LITHIUM DISSOLVED (UG/L AS LI)
MAY									
24...	<10	2	<10	<10	<1.0	61	<6	<3	<4
24...	20	1	<10	<10	4.0	51	<6	<3	<4
JUL									
26...	<10	<1	<10	<10	<1.0	46	<6	6	<4
26...	<10	8	<10	<10	<1.0	48	<6	9	<4
SEP									
21...	<10	16	<10	<10	2.0	48	<6	4	<4
21...	<10	3	<10	<10	<1.0	48	<6	4	<4

09019500 COLORADO RIVER NEAR GRANBY, CO

LOCATION.--Lat 40°07'15", long 105°54'00", in SW¼NW¼ sec.22, T.2 N., R.76 W., Grand County, Hydrologic Unit 14010001, on right bank 0.3 mi upstream from bridge on U.S. Highway 34, 1.3 mi upstream from Willow Creek, and 3.2 mi northeast of Granby.

DRAINAGE AREA.--323 mi².

PERIOD OF RECORD.--October 1907 to September 1911 (published as Grand River near Granby), October 1933 to September 1953. May 1961 to current year (irrigation season only). Monthly discharge only for some periods,published in WSP 1313.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,960 ft above National Geodetic Vertical Datum of 1929, from topographic map. June 10, 1908, to Sept. 30, 1911, and May 12 to June 10, 1934, nonrecording gage, at site 300 ft upstream at different datums. June 11, 1934, to Sept. 30, 1953, water-stage recorder at present site and datum.

REMARKS.--No estimated daily discharges: Records good. Flow regulated by Lake Granby (station 09018500) since Sept. 13, 1949. Several diversions for irrigation of hay meadows upstream from station. Transmountain diversions upstream from station by Eureka and Grand River ditches and Alva B. Adams tunnel (see elsewhere in this report). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF SEASONAL RECORD.--Maximum discharge, 2,510 ft³/s, July 11, 1983, gage height, 5.39 ft; minimum daily, 9.6 ft³/s, Sept. 21, 1981.

EXTREMES FOR PERIOD OF CONTINUOUS RECORD.--Maximum discharge observed, 4,100 ft³/s, June 20, 1909, gage height, 5.5 ft, site and datum then in use; minimum daily, 6.6 ft³/s, Jan. 29, 1950; minimum observed prior to starting construction of Shadow Mountain Lake, 20 ft³/s, Apr. 6, 1936 (discharge measurement).

EXTREMES FOR CURRENT SEASON.--Maximum discharge, 100 ft³/s at 1830 July 21, gage height, 1.27 ft; minimum daily, 11 ft³/s, Apr. 29, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	39	55	55	34	20
2	---	---	---	---	---	---	---	67	56	57	33	14
3	---	---	---	---	---	---	---	67	59	57	29	13
4	---	---	---	---	---	---	---	67	59	57	29	13
5	---	---	---	---	---	---	---	61	57	55	30	13
6	---	---	---	---	---	---	---	57	57	52	31	13
7	---	---	---	---	---	---	---	57	56	53	31	14
8	---	---	---	---	---	---	---	59	59	52	28	18
9	---	---	---	---	---	---	---	59	57	51	30	15
10	---	---	---	---	---	---	---	61	55	51	30	14
11	---	---	---	---	---	---	---	60	53	51	28	14
12	---	---	---	---	---	---	---	56	55	52	27	14
13	---	---	---	---	---	---	---	57	59	53	27	14
14	---	---	---	---	---	---	23	60	57	56	28	15
15	---	---	---	---	---	---	24	56	56	57	28	21
16	---	---	---	---	---	---	27	57	56	57	30	13
17	---	---	---	---	---	---	26	56	57	55	31	14
18	---	---	---	---	---	---	24	56	56	56	26	14
19	---	---	---	---	---	---	23	56	56	56	27	14
20	---	---	---	---	---	---	22	56	57	55	27	14
21	---	---	---	---	---	---	21	55	57	59	27	14
22	---	---	---	---	---	---	21	57	57	56	26	13
23	---	---	---	---	---	---	21	56	55	56	26	13
24	---	---	---	---	---	---	21	56	55	57	26	13
25	---	---	---	---	---	---	21	59	59	56	25	12
26	---	---	---	---	---	---	21	56	55	57	25	12
27	---	---	---	---	---	---	21	53	55	60	25	13
28	---	---	---	---	---	---	16	53	55	60	24	13
29	---	---	---	---	---	---	11	56	55	61	25	14
30	---	---	---	---	---	---	11	56	55	61	24	14
31	---	---	---	---	---	---	---	55	---	50	24	---
TOTAL	---	---	---	---	---	---	---	1776	1690	1721	861	425
MEAN	---	---	---	---	---	---	---	57.3	56.3	55.5	27.8	14.2
MAX	---	---	---	---	---	---	---	67	59	61	34	21
MIN	---	---	---	---	---	---	---	39	53	50	24	12
AC-FT	---	---	---	---	---	---	---	3520	3350	3410	1710	843

09020700 WILLOW CREEK RESERVOIR NEAR GRANBY, CO

LOCATION.--Lat 40°08'49", long 105°56'31", in SE¼ sec.7, T.2 N., R.76 W., Grand County, Hydrologic Unit 14010001, in shaft house near right end of Willow Creek Dam, 3.2 mi upstream from mouth, and 4.2 mi north of Granby.

DRAINAGE AREA.--134 mi².

PERIOD OF RECORD.--May 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earth and rockfill dam; storage began March 1953. Dead storage pool filled May 3, 1953. Usable capacity, 9,060 acre-ft between elevations 8,077.00 ft, trash rack sill at outlet, and 8,130.00 ft, crest of spillway. Dead storage, 1,490 acre-ft. Figures given represent usable contents. Water is pumped to Lake Granby for transmountain diversion for irrigation and power in South Platte River basin.

COOPERATION.--Records provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 9,100 acre-ft, May 24, 1984, elevation, 8,130.12 ft; minimum 50 acre-ft, Dec. 4, 1985, to Jan. 17, 1986, drawdown for maintenance, elevation, 8,077.50 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 8,510 acre-ft, Oct. 30, elevation, 8,128.10 ft; minimum, 5,680 acre-ft, Nov. 7, elevation, 8,116.74 ft.

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	8,126.65	8,100	-
Oct. 31	8,127.98	8,470	+370
Nov. 30	8,118.00	5,950	-2,520
Dec. 31	8,119.13	6,210	+260
CAL YR 1988			-160
Jan. 31	8,120.31	6,480	+270
Feb. 28	8,121.87	6,850	+370
Mar. 31	8,125.59	7,810	+960
Apr. 30	8,120.06	6,420	-1,390
May 31	8,121.27	6,710	+290
June 30	8,121.15	6,680	- 30
July 31	8,123.70	7,310	+630
Aug. 31	8,119.74	6,350	-960
Sept. 30	8,121.26	6,700	+350
WTR YR 1989			-1,400

09022000 FRASER RIVER AT UPPER STATION, NEAR WINTER PARK, CO

LOCATION.--Lat 39°50'45", long 105°45'05", in Sec.26, T.2 S., R.75 W., Grand County, Hydrologic Unit 14010001, on left bank 0.8 mi upstream from Parsenn Creek and 2.5 mi south of Winter Park.

DRAINAGE AREA.--10.5 mi².

PERIOD OF RECORD.--May to September 1908, July to November 1909 (published as "at upper station near Fraser"), October 1968 to September 1973, Aug. 21, 1984 to current year. January to September 1911, gage heights only (published as "near Fraser"). Records for August to December 1910, published in WSP 289 as "near Fraser" are unreliable and should not be used.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 9,520 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1968, nonrecording gage at site 0.9 mi upstream at different datum. Since Oct. 1, 1968, supplementary water-stage recorder and Parshall flume on Berthoud Pass ditch.

REMARKS.--Estimated daily discharges: Nov. 8, 12, 16, Jan. 5, Feb. 6-13, and Mar. 31 to Apr. 2. Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station through Berthoud Pass ditch to Moffat water tunnel, (see elsewhere in this report). Several observations of specific conductance and water temperature were obtained, and are published elsewhere in this report.

AVERAGE DISCHARGE.--10 years, 14.2 ft³/s; 10,290 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 181 ft³/s, June 5, 1972, gage height, 2.15 ft; minimum daily, 1.2 ft³/s, Feb. 26, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 70 ft³/s at 1700 May 23, gage height 1.63 ft; minimum daily, 1.2 ft³/s, Feb. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	3.7	3.4	2.2	1.6	1.4	1.9	10	47	27	18	7.1
2	5.3	3.7	3.4	2.2	1.6	1.4	1.9	9.3	45	26	19	7.1
3	5.0	3.3	3.3	2.2	1.6	1.4	1.8	8.4	44	26	15	6.9
4	4.9	2.4	3.3	2.2	1.6	1.4	1.9	7.8	42	26	15	6.6
5	5.2	2.9	3.2	2.2	1.6	1.3	2.1	7.6	39	26	14	6.6
6	5.2	3.7	3.3	2.4	1.6	1.4	2.4	8.0	38	25	14	6.5
7	4.8	4.2	3.1	2.2	1.6	1.4	2.8	8.6	36	25	15	6.6
8	4.8	3.9	3.1	2.4	1.5	1.5	3.3	11	36	24	15	6.9
9	4.7	3.6	3.1	2.4	1.5	1.6	2.8	16	35	22	16	7.1
10	4.5	3.6	3.1	2.4	1.5	1.7	2.4	19	35	23	16	6.9
11	4.5	4.0	3.1	2.4	1.5	1.8	2.5	19	37	22	17	6.9
12	4.3	3.9	3.0	2.2	1.5	1.9	2.4	20	37	24	14	7.1
13	4.3	3.9	3.0	2.3	1.4	2.0	2.5	19	39	23	13	7.1
14	4.3	4.0	3.0	2.4	1.4	1.8	2.8	16	38	22	12	6.7
15	4.3	3.7	2.8	2.2	1.5	1.8	3.3	15	38	22	12	6.6
16	4.2	4.0	3.1	2.1	1.4	1.8	3.6	15	44	21	11	6.4
17	4.2	4.3	3.0	2.1	1.4	1.9	4.2	15	49	20	11	6.0
18	4.3	3.9	2.8	2.0	1.4	1.9	5.1	18	48	20	11	5.9
19	4.5	3.6	2.8	2.0	1.4	1.9	5.8	25	52	20	10	5.5
20	4.5	3.3	2.8	1.9	1.4	1.7	7.6	31	52	20	10	5.3
21	4.5	2.6	2.7	1.9	1.3	1.7	9.4	33	49	19	9.3	6.0
22	4.3	2.0	2.6	1.9	1.3	1.7	12	38	39	19	9.2	5.7
23	4.2	2.6	2.6	1.8	1.4	1.9	12	52	34	19	8.8	5.5
24	4.0	3.7	2.6	1.8	1.4	2.2	12	57	31	21	8.5	5.3
25	3.9	3.6	2.6	1.8	1.5	2.6	13	45	28	22	8.2	5.3
26	3.9	3.7	2.6	1.7	1.2	2.7	14	35	27	20	8.0	5.2
27	3.9	3.7	2.5	1.8	1.4	2.6	13	35	27	18	8.0	5.2
28	3.9	4.0	2.3	1.8	1.4	2.8	14	41	27	21	7.8	5.2
29	3.7	3.9	2.2	1.8	---	2.8	12	45	27	27	7.5	5.0
30	3.7	3.6	2.2	1.7	---	2.1	11	48	27	22	7.5	5.0
31	3.7	---	2.2	1.6	---	1.9	---	50	---	19	7.3	---
TOTAL	136.8	107.0	88.8	64.0	40.9	58.0	185.5	777.7	1147	691	368.1	185.7
MEAN	4.41	3.57	2.86	2.06	1.46	1.87	6.18	25.1	38.2	22.3	11.9	6.19
MAX	5.3	4.3	3.4	2.4	1.6	2.8	14	57	52	27	19	7.1
MIN	3.7	2.0	2.2	1.6	1.2	1.3	1.8	7.6	27	18	7.3	5.0
AC-FT	271	212	176	127	81	115	368	1540	2280	1370	730	368

CAL YR 1988 TOTAL 5207.7 MEAN 14.2 MAX 100 MIN 1.5 AC-FT 10330
WTR YR 1989 TOTAL 3850.5 MEAN 10.5 MAX 57 MIN 1.2 AC-FT 7640

09024000 FRASER RIVER NEAR WINTER PARK, CO

LOCATION.--Lat 39°54'00", long 105°46'34", in SE¼ sec.4, T.2 S., R.75 W., Grand County, Hydrologic Unit 14010001, on left bank 500 ft downstream from bridge on U.S. Highway 40, 1.1 mi northwest of Winter Park, 2.0 mi upstream from Vasquez Creek, 3.5 mi downstream from point of diversion for Moffat water tunnel, and 3.9 mi southeast of Fraser.

DRAINAGE AREA.--27.6 mi².

PERIOD OF RECORD.--September 1910 to current year. Monthly discharge only for some periods, published in WSP1313. Published as "near Arrow" 1910-23 and as "near West Portal" 1924-39. Records since June 9, 1936, equivalent to earlier records if transmountain diversions are added to flow past station.

REVISED RECORDS.--WSP 929: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 8,906.23 ft, Colorado State Highway Datum (levels by U.S. Geological Survey). Sept. 23, 1910, to May 12, 1916, nonrecording gage at trail bridge 0.6 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Oct. 15 to Nov. 1, Nov. 4-6, 8-13, 15-23, 27-29, and Feb. 4 to Apr. 10. Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station through Berthoud Pass ditch (see elsewhere in this report) and to Moffat water tunnel (not known since 1968). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 820 ft³/s, June 13, 1918, gage height, 2.9 ft; minimum daily determined, 2.0 ft³/s, Mar. 30, Apr. 9, 1912, Jan 23, 1915.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 49 ft³/s at 1430 July 29, gage height, 0.98 ft; minimum daily, 2.7 ft³/s, Nov. 26.

REVISIONS.--The maximum discharge for the water year 1988 has been revised to 271 ft³/s at 1730 June 20, gage height, 2.01 ft. This figure supersedes that published in the report for 1988.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	5.8	3.4	4.9	4.8	4.0	5.3	8.6	18	11	12	10
2	6.6	5.6	3.2	4.9	4.7	4.0	5.4	9.7	17	11	12	11
3	6.6	6.0	3.5	4.9	4.7	4.0	5.4	9.6	16	11	12	8.7
4	6.4	6.2	3.7	4.9	4.6	4.0	5.4	9.7	17	10	11	11
5	6.6	6.4	3.8	4.9	4.7	4.0	5.4	10	16	10	11	15
6	6.6	6.6	4.0	5.0	3.4	4.0	5.4	11	15	11	12	15
7	6.5	6.7	[illegible]	4.6	3.5	4.0	5.4	12	15	11	12	15
8	6.4	6.6	4.2	4.9	3.5	4.0	5.6	14	16	10	12	13
9	6.3	6.5	4.2	[illegible]	3.5	4.0	5.6	14	15	10	13	10
10	6.6	6.4	4.3	5.1	3.5	4.0	5.8	15	14	8.7	13	10
11	6.9	6.3	4.8	5.1	3.5	4.0	5.9	16	13	8.0	13	11
12	3.7	6.2	4.8	4.8	3.5	[illegible]	[illegible]	16	13	8.2	13	12
13	3.7	6.2	4.8	4.9	3.5	[illegible]	6.9	15	14	9.6	12	12
14	3.7	6.1	4.5	5.1	3.4	4.2	7.1	14	13	11	12	11
15	[illegible]	[illegible]	4.7	[illegible]	[illegible]	[illegible]	[illegible]	14	12	10	13	8.1
16	[illegible]	5.6	4.7	5.1	3.5	[illegible]	[illegible]	15	11	9.0	13	9.5
17	[illegible]	[illegible]	4.4	[illegible]	3.5	[illegible]	11	15	11	9.7	13	6.5
18	3.5	4.7	4.7	4.8	3.5	[illegible]	12	17	11	10	12	5.8
19	3.8	[illegible]	4.8	4.8	3.5	[illegible]	12	19	11	11	12	5.7
20	3.9	4.3	4.7	4.7	3.5	[illegible]	14	19	11	11	11	6.3
21	3.8	3.7	[illegible]	[illegible]	[illegible]	[illegible]	13	18	11	11	11	6.1
22	4.0	3.4	[illegible]	4.5	[illegible]	[illegible]	13	[illegible]	11	11	11	7.8
23	4.3	3.1	[illegible]	[illegible]	[illegible]	[illegible]	13	21	11	11	11	6.2
24	5.6	2.9	4.7	4.9	[illegible]	[illegible]	13	21	11	12	11	4.1
25	5.6	[illegible]	4.8	4.7	[illegible]	[illegible]	13	[illegible]	9.7	11	9.7	5.4
26	5.6	2.7	4.8	4.9	[illegible]	4.5	12	20	11	10	8.7	5.8
27	5.6	2.9	4.6	[illegible]	4.5	4.8	11	21	11	11	10	5.5
28	5.3	2.9	4.7	4.9	4.3	5.0	9.4	20	9.7	13	10	5.7
29	5.8	[illegible]	4.8	4.8	---	[illegible]	9.0	19	14	18	10	7.0
30	5.8	[illegible]	4.9	4.8	---	[illegible]	8.8	20	12	9.5	9.8	6.7
31	5.9	---	4.8	4.9	---	[illegible]	---	19	---	11	10	---
TOTAL	162.6	148.1	138.8	[illegible]	[illegible]	130.5	263.9	491.1	390.4	337.7	355.5	262.4
MEAN	5.25	4.94	4.48	[illegible]	3.75	4.21	8.80	15.8	13.0	10.9	11.5	8.75
MAX	6.9	6.7	4.9	[illegible]	4.9	[illegible]	14	21	18	18	13	15
MIN	3.3	2.7	3.2	[illegible]	3.4	4.0	5.3	8.6	9.7	8.0	8.7	4.1
AC-FT	323	294	275	[illegible]	208	259	523	974	774	669	705	520

CAL YR 1988 TOTAL 4563.3 MEAN 12.5 MAX 169 MIN 2.7 AC-FT 9050
WTR YR 1989 TOTAL 2930.4 MEAN 8.03 MAX 21 MIN 2.7 AC-FT 5810

09025000 VASQUEZ CREEK AT WINTER PARK, CO
(Formerly published as Vasquez Creek near Winter Park, CO)

LOCATION.--Lat 39°55'13", long 105°47'05", in NE¼NW¼ sec.33. T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on right bank 30 ft downstream from bridge on U.S. Highway 40, 0.2 mi upstream from mouth, 2.5 mi northwest of Winter Park, 2.5 mi southeast of Fraser, and 4.5 mi downstream from Moffat water tunnel diversion.

DRAINAGE AREA.--27.8 mi^2.

PERIOD OF RECORD.--June to August 1907, July to November 1909, October 1933 to current year. Monthly discharge only for some periods, published in WSP 1313. Records for June to October 1908, published in WSP 269, are unreliable and should not be used. Published as Vasquez River at lower station, near Fraser 1907-9, as "near West Portal" 1934-39, and as "near Winter Park" 1940-87. Records for May 26, 1937, to September 1959, equivalent to earlier records if diversion to Moffat water tunnel is added to flow past station.

REVISED RECORDS.--See PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 8,768.48 ft above National Geodetic Vertical Datum of 1929. June 1, 1907, to Oct. 31, 1909, nonrecording gage at site 0.8 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Nov. 13 to Mar. 8, Mar. 13-18, and Mar. 28 to Apr. 13. Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station to Moffat water tunnel not known since 1959. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 526 ft^3/s, June 27, 1983, gage height, 4.14 ft, from rating curve extended above 286 ft^3/s; no flow at times in 1944, 1946, 1956, 1960, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19 ft^3/s at 2100 Apr. 24, gage height, 1.85 ft, and at 2300 May 15, gage height, 1.86 ft, maximum gage height, 2.02 ft at 0900 Feb. 16 (backwater from ice); minimum daily discharge, 3.3 ft^3/s, Mar. 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	4.7	4.5	4.2	4.0	4.0	5.0	6.0	12	11	9.4	9.7
2	4.9	4.7	4.5	4.2	4.0	4.0	4.9	6.3	14	8.3	11	7.6
3	4.8	4.7	4.5	4.2	4.0	4.0	4.8	6.5	13	9.5	10	6.4
4	4.9	4.7	4.5	4.2	4.0	4.0	4.8	6.1	13	8.8	8.6	8.8
5	5.1	4.7	4.5	4.2	4.0	4.0	5.0	6.3	11	9.2	9.5	8.5
6	5.3	5.4	4.5	4.2	4.0	4.0	5.4	9.2	9.7	11	8.8	8.3
7	5.6	5.3	4.5	4.2	4.0	4.0	6.0	11	12	9.4	9.0	8.3
8	5.3	5.0	4.5	4.2	4.0	4.1	7.7	14	12	11	9.1	9.5
9	7.6	4.4	4.5	4.2	4.0	4.2	7.3	15	10	10	8.8	9.6
10	13	4.8	4.5	4.2	4.0	4.3	6.8	15	11	8.8	11	9.6
11	13	4.9	4.2	4.2	4.0	4.4	6.5	15	12	9.0	10	9.3
12	12	4.9	4.2	4.2	4.0	4.4	6.0	14	11	10	15	9.4
13	12	5.0	4.2	4.2	4.0	4.5	5.8	13	14	9.9	15	9.3
14	9.4	5.0	4.2	4.0	4.0	4.5	5.5	12	13	10	12	9.1
15	5.7	5.0	4.2	4.0	4.0	4.5	4.5	13	13	9.6	10	6.9
16	5.4	5.0	4.2	4.0	4.0	4.5	5.3	17	11	8.5	9.8	4.2
17	5.3	5.0	4.2	4.0	4.0	4.5	6.2	16	10	10	10	4.4
18	5.4	5.0	4.2	4.0	4.0	4.5	7.5	16	11	9.8	10	4.3
19	5.5	5.0	4.2	4.0	4.0	4.5	8.0	17	11	9.2	10	4.1
20	5.6	5.0	4.2	4.0	4.0	4.8	9.1	15	8.7	9.0	10	4.2
21	5.5	4.5	4.2	4.0	4.0	3.3	11	13	9.0	9.3	8.8	4.4
22	5.4	4.5	4.2	4.0	4.0	3.7	12	15	12	9.0	7.8	4.5
23	5.3	4.5	4.2	4.0	4.0	3.7	14	13	12	7.2	7.9	4.4
24	5.3	4.5	4.2	4.0	4.0	4.1	16	15	12	9.5	10	4.3
25	5.3	4.5	4.2	4.0	4.0	4.8	15	13	11	10	10	4.4
26	5.2	4.5	4.2	4.0	4.0	5.5	12	14	12	9.7	11	4.4
27	5.0	4.5	4.2	4.0	4.0	5.6	9.8	14	9.5	9.5	9.5	4.9
28	4.8	4.5	4.2	4.0	4.0	5.7	8.2	13	9.6	10	7.2	5.0
29	5.1	4.5	4.2	4.0	---	5.8	7.6	11	10	10	8.2	4.9
30	5.2	4.5	4.2	4.0	---	5.4	7.2	8.5	10	9.1	9.5	4.9
31	5.0	---	4.2	4.0	---	5.2	---	11	---	9.0	9.0	---
TOTAL	197.8	143.2	133.2	126.6	112.0	138.5	234.9	383.9	339.5	294.3	305.9	197.6
MEAN	6.38	4.77	4.30	4.08	4.00	4.47	7.83	12.4	11.3	9.49	9.87	6.59
MAX	13	5.4	4.5	4.2	4.0	5.8	16	17	14	11	15	9.7
MIN	4.8	4.4	4.2	4.0	4.0	3.3	4.5	6.0	8.7	7.2	7.2	4.1
AC-FT	392	284	264	251	222	275	466	761	673	584	607	392

CAL YR 1988 TOTAL 3808.0 MEAN 10.4 MAX 136 MIN 3.0 AC-FT 7550
WTR YR 1989 TOTAL 2607.4 MEAN 7.14 MAX 17 MIN 3.3 AC-FT 5170

09025400 ELK CREEK NEAR FRASER, CO

LOCATION.--Lat 39°55'09", long 105°49'31", in SE¼NW¼ sec.31, T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on right bank 100 ft upstream from unnamed tributary 1,150 ft downstream from West Elk Creek, 2.0 mi southwest of Fraser, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--7.15 mi².

PERIOD OF RECORD.--September 1970 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,805 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 6, 8-10, 12, Nov. 14 to Mar. 31, Apr. 6-10, and Apr. 12-15. Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station to Moffat water tunnel. Diversions for irrigation of about 100 acres of hay meadows upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 106 ft³/s, May 24, 1984, gage height, 3.13 ft, maximum gage height, 3.97 ft, Mar. 12, Apr. 10-16, 1987 (backwater from ice); minimum daily discharge, 0.10 ft³/s, Jan. 13, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8.1 ft³/s at 1900 Apr. 23, gage height, 1.71 ft, and at 2000 May 8, gage height, 1.71 ft, maximum gage height, 2.95 ft at 1100 Apr. 10 (backwater from ice); minimum daily discharge, 0.45 ft³/s, Mar. 17-22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.85	.86	.80	.70	.55	.82	3.3	2.4	.76	.78	.82
2	.75	.75	.86	.80	.70	.55	.82	3.9	2.3	.70	1.7	.70
3	.72	1.0	.86	.80	.66	.55	.77	4.1	2.3	1.4	1.2	.67
4	.72	1.1	.86	.80	.60	.55	.79	4.2	2.9	1.6	.94	.55
5	.75	1.1	.86	.80	.52	.55	.75	4.4	3.0	1.6	.79	.56
6	.81	1.1	.86	.75	.55	.54	.82	4.8	2.7	1.6	.67	.59
7	.77	1.0	.86	.70	.55	.54	1.0	5.6	2.4	1.5	.85	.64
8	.74	1.0	.86	.70	.55	.53	1.3	6.8	2.4	1.4	1.0	.73
9	.74	1.0	.86	.70	.55	.51	1.1	7.2	2.5	1.4	.77	.88
10	.75	1.0	.86	.70	.55	.50	1.0	7.4	2.3	1.7	.76	.73
11	.72	1.0	.86	.70	.55	.49	1.1	7.6	2.2	1.8	.61	.86
12	.69	.97	.86	.70	.55	.47	1.4	7.2	2.1	1.6	.79	.93
13	.67	.92	.86	.70	.55	.46	1.5	6.1	2.5	1.5	1.3	1.2
14	.67	.92	.86	.70	.55	.46	1.6	6.0	1.9	1.3	.85	1.0
15	.66	.90	.86	.70	.55	.46	1.9	5.8	1.7	1.1	.73	.94
16	.61	.90	.86	.70	.55	.46	2.6	5.9	1.6	.98	.66	.88
17	.63	.90	.86	.70	.55	.45	3.5	5.7	1.9	.91	1.2	.95
18	.66	.90	.86	.70	.55	.45	4.3	5.2	1.7	.89	1.7	.91
19	.69	.90	.86	.70	.55	.45	4.1	4.4	1.6	.87	1.5	.79
20	.72	.90	.80	.70	.55	.45	4.4	4.1	1.5	.81	1.5	.94
21	.67	.90	.80	.70	.55	.45	5.3	3.7	1.5	.54	1.4	1.0
22	.67	.90	.80	.70	.55	.45	5.4	3.5	1.5	.53	1.3	.94
23	.64	.90	.80	.70	.55	.46	5.9	3.4	1.4	.54	1.3	.92
24	.62	.90	.80	.70	.55	.48	5.5	3.1	1.4	.61	1.3	.91
25	.67	.90	.80	.70	.55	.51	5.4	2.9	1.3	.70	1.1	.90
26	.69	.90	.80	.70	.55	.56	5.1	2.6	1.2	.61	1.1	.88
27	.60	.90	.80	.70	.55	.62	4.4	1.3	1.1	.65	1.2	.85
28	.77	.90	.80	.70	.55	.69	3.8	1.3	1.0	.69	1.1	.92
29	.60	.90	.80	.70	---	.74	3.5	1.1	1.2	1.7	1.0	.87
30	.63	.90	.80	.70	---	.76	3.3	1.2	.90	1.6	1.2	.86
31	.68	---	.80	.70	---	.80	---	1.5	---	.93	.97	---
TOTAL	21.81	28.11	25.94	22.25	15.83	16.49	83.17	135.8	56.40	34.51	33.27	25.32
MEAN	.70	.94	.84	.72	.57	.53	2.77	4.38	1.88	1.11	1.07	.84
MAX	1.1	1.1	.86	.80	.70	.80	5.9	7.6	3.0	1.8	1.7	1.2
MIN	.60	.75	.80	.70	.52	.45	.75	1.1	.90	.53	.61	.55
AC-FT	43	56	51	44	31	33	165	269	112	68	66	50

CAL YR 1988 TOTAL 874.34 MEAN 2.39 MAX 26 MIN .40 AC-FT 1730
WTR YR 1989 TOTAL 498.90 MEAN 1.37 MAX 7.6 MIN .45 AC-FT 990

09026500 ST. LOUIS CREEK NEAR FRASER, CO

LOCATION.--Lat 39°54'36", long 105°52'40", in SE¼SW¼ sec.34, T.1 S., R.76 W., Grand County, Hydrologic Unit 14010001, on left bank 300 ft downstream from West St. Louis Creek and 4.1 mi southwest of Fraser.

DRAINAGE AREA.--32.9 mi².

PERIOD OF RECORD.--October 1933 to current year. Prior to August 1934, monthly discharge only, published in WSP 1313. Records for May 1956 to September 1959, equivalent to earlier records if diversion to Moffat water tunnel is added to flow past station.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 8,980.17 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 20-21, Dec. 19 to Mar. 26, and Mar. 30 to Apr. 14. Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station to Moffat water tunnel not known since 1959. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 470 ft³/s, June 15, 1952, gage height, 2.89 ft; maximum gage height, 3.21 ft, June 10, 1952 (backwater from log on control); minimum discharge not determined, probably occurred during January or February 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 31 ft³/s at 2100 May 22, gage height, 1.32 ft, maximum gage height, 1.51 ft, Mar. 25 (backwater from ice); minimum daily discharge, 4.8 ft³/s, Feb. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	5.9	7.0	6.6	5.0	5.4	7.2	9.7	27	19	19	11
2	7.8	6.0	7.1	6.6	5.0	5.4	7.2	9.9	26	19	22	11
3	7.3	7.3	7.3	6.6	5.0	5.4	7.0	10	25	19	18	11
4	7.8	7.0	7.4	6.6	5.0	5.4	7.0	9.7	26	19	18	10
5	8.1	7.8	7.6	6.6	4.8	5.4	7.0	9.5	24	18	18	10
6	7.9	8.8	7.8	6.2	5.0	5.4	7.4	11	24	19	17	10
7	7.7	7.6	7.8	6.2	5.0	5.4	8.2	13	23	19	17	10
8	7.6	7.6	7.3	6.2	5.0	5.6	9.0	16	23	19	17	11
9	8.9	7.7	7.2	6.2	5.0	5.9	8.4	17	23	19	17	11
10	12	8.0	7.1	6.2	5.0	6.3	7.8	17	23	19	17	11
11	12	7.4	6.7	6.2	5.0	6.5	7.4	13	22	19	18	12
12	10	7.4	6.8	6.2	5.0	6.3	7.2	13	23	21	19	12
13	8.9	7.4	6.8	6.2	5.0	6.9	7.2	17	23	20	18	12
14	8.5	7.6	7.1	6.2	5.0	7.0	7.2	16	22	19	17	12
15	8.3	7.3	6.7	6.2	5.0	7.0	8.5	17	21	19	16	11
16	8.0	8.6	6.6	5.6	5.0	7.0	9.1	24	21	18	16	9.6
17	8.0	8.1	7.0	5.6	5.0	7.0	11	24	22	18	17	9.0
18	9.2	7.6	7.2	5.6	5.0	7.0	11	25	21	19	16	9.3
19	8.6	7.3	7.2	5.6	5.0	7.0	11	28	20	19	16	7.8
20	8.5	7.6	7.2	5.6	5.0	7.1	12	29	20	19	16	8.1
21	8.1	7.3	7.2	5.6	5.0	7.0	13	29	20	19	15	7.7
22	7.9	7.9	7.2	5.6	5.0	7.0	14	29	20	19	14	[illegible]
23	7.6	7.9	7.2	5.6	5.0	7.0	15	24	21	22	14	[illegible]
24	7.3	7.3	7.2	5.6	5.0	7.0	15	18	19	[illegible]	[illegible]	[illegible]
25	7.1	7.2	7.2	5.5	5.0	7.4	15	17	[illegible]	[illegible]	[illegible]	[illegible]
26	6.9	7.1	6.6	5.2	5.0	7.6	14	27	13	[illegible]	[illegible]	[illegible]
27	6.9	7.0	6.6	5.2	5.0	7.2	13	[illegible]	13	16	[illegible]	[illegible]
28	6.2	7.0	6.6	5.2	5.0	7.5	10	27	13	17	[illegible]	[illegible]
29	6.4	7.3	6.6	5.2	---	7.4	9.9	23	14	[illegible]	11	[illegible]
30	6.7	7.1	6.6	5.2	---	7.4	9.9	23	[illegible]	[illegible]	11	[illegible]
31	6.2	---	6.6	5.2	---	7.4	---	[illegible]	---	[illegible]	11	---
TOTAL	249.6	223.5	213.5	182.2	140.2	204.7	297.5	643.8	649	597	[illegible]	[illegible]
MEAN	8.05	7.45	7.05	5.88	5.01	6.60	9.92	20.8	21.6	19.3	[illegible]	[illegible]
MAX	12	8.8	7.8	6.6	5.4	7.6	15	29	27	[illegible]	[illegible]	12
MIN	6.2	5.8	6.6	5.2	4.8	5.4	7.0	9.5	13	16	11	[illegible]
AC-FT	495	443	433	361	278	406	590	1280	1290	[illegible]	[illegible]	[illegible]

CAL YR 1988 TOTAL 5697.0 MEAN 15.6 MAX 162 MIN 5.0 AC-FT 11300
WTR YR 1989 TOTAL 4171.7 MEAN 11.4 MAX 29 MIN 4.8 AC-FT 8270

09032000 RANCH CREEK NEAR FRASER, CO

LOCATION.--Lat 39°57'00", long 105°45'54", in NW¼NE¼ sec.22, T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on right bank 450 ft downstream from Middle Fork and 2.7 mi east of Fraser.

DRAINAGE AREA.--19.9 mi^2.

PERIOD OF RECORD.--August 1934 to current year. Records since May 15, 1949, equivalent to earlier records if diversion to Moffat water tunnel is added to flow past station.

REVISED RECORDS.--WSP 1243: 1935.

GAGE.--Water-stage recorder. Elevation of gage is 8,685 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 5-6, 8-18, Mar. 31, Apr. 4, 10, 12-13. Records good. Diversion upstream from station for irrigation of hay meadows along Fraser River. Transmountain diversion upstream from station to Moffat water tunnel . Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 451 ft^3/s, June 27, 1983, gage height, 3.96 ft; minimum daily, 0.40 ft^3/s, Sept. 21, Oct. 6, 1960, Sept. 24-26, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 41 ft^3/s at 1530 July 29, gage height, 1.68 ft, maximum gage height, 1.96 ft, Nov. 17 (backwater from ice); minimum daily discharge, 0.52 ft^3/s, Oct. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.54	2.7	2.9	2.4	1.9	1.8	2.9	6.7	4.6	4.2	6.0	2.3
2	.54	2.8	2.9	2.4	1.9	1.8	2.8	6.8	4.3	5.2	6.5	2.1
3	.52	5.3	2.8	2.4	1.9	1.8	2.8	6.7	3.9	4.9	5.8	2.0
4	.54	4.9	2.8	2.3	1.9	1.8	2.7	6.3	4.4	4.6	5.3	1.3
5	.56	6.6	2.8	2.3	1.8	1.9	2.6	6.4	4.1	4.3	5.1	.84
6	.65	6.8	2.7	2.3	1.8	1.9	2.7	7.6	3.2	4.1	4.8	.82
7	.69	7.1	2.7	2.3	1.8	1.9	3.4	9.1	2.8	4.0	4.7	.80
8	.68	7.5	2.7	2.3	1.8	2.1	4.0	11	3.8	4.6	4.4	1.1
9	.61	7.5	2.6	2.3	1.8	2.2	3.5	11	4.7	4.3	4.4	1.5
10	.62	7.4	2.6	2.3	1.8	2.3	3.2	11	4.0	4.2	4.7	1.1
11	.62	7.3	2.6	2.3	1.8	2.4	2.8	11	4.1	4.6	4.5	.99
12	.60	7.0	2.6	2.3	1.8	2.5	2.8	11	5.3	4.6	4.7	2.2
13	.58	6.4	2.5	2.3	1.8	2.3	2.8	10	5.0	4.3	4.9	6.3
14	.58	6.4	2.4	2.3	1.8	2.5	3.5	9.9	4.5	3.5	4.5	5.9
15	.54	6.4	2.4	2.3	1.8	2.3	3.9	11	4.2	3.2	4.0	5.6
16	.54	5.8	2.4	2.3	1.7	2.4	4.7	12	4.0	3.7	3.8	5.0
17	.54	5.0	2.4	2.3	1.6	2.4	6.1	12	4.5	3.3	4.3	4.1
18	.54	4.3	2.3	2.3	1.6	2.4	10	12	4.2	1.5	4.4	4.3
19	.56	3.6	2.3	2.2	1.6	2.4	9.2	13	4.0	1.1	3.9	4.7
20	2.1	3.4	2.4	2.1	1.6	2.4	8.8	13	3.9	1.7	4.0	5.2
21	3.2	3.2	2.4	1.9	1.6	2.4	10	14	3.8	2.0	3.5	6.0
22	3.0	3.3	2.4	1.9	1.8	2.4	11	14	3.9	2.1	3.3	5.3
23	2.9	3.4	2.4	1.9	1.8	2.4	11	13	3.8	2.0	3.2	5.0
24	2.9	3.3	2.3	1.9	1.8	2.5	12	13	3.9	1.9	3.1	4.8
25	2.8	3.1	2.3	1.8	1.8	2.9	12	12	3.8	3.1	3.0	4.7
26	2.7	3.1	2.3	1.8	1.8	3.1	12	11	3.8	5.5	2.8	4.8
27	2.6	3.1	2.3	1.8	1.8	3.0	10	9.5	4.0	5.0	2.8	4.8
28	2.6	2.9	2.2	1.8	1.8	3.2	8.6	8.1	4.1	5.1	2.6	4.8
29	2.6	2.9	2.2	1.8	---	3.4	7.3	7.3	4.0	12	2.5	4.7
30	2.9	2.9	2.4	1.7	---	3.1	7.0	6.4	3.9	8.5	2.5	4.6
31	2.6	---	2.4	1.9	---	3.0	---	5.5	---	6.7	2.5	---
TOTAL	43.95	145.4	77.4	66.2	49.7	74.9	186.1	311.3	122.5	129.8	126.5	107.65
MEAN	1.42	4.85	2.50	2.14	1.77	2.42	6.20	10.0	4.08	4.19	4.08	3.59
MAX	3.2	7.5	2.9	2.4	1.9	3.4	12	14	5.3	12	6.5	6.3
MIN	.52	2.7	2.2	1.7	1.6	1.8	2.6	5.5	2.8	1.1	2.5	.80
AC-FT	87	288	154	131	99	149	369	617	243	257	251	214

CAL YR 1988 TOTAL 3113.48 MEAN 8.51 MAX 133 MIN .40 AC-FT 6180
WTR YR 1989 TOTAL 1441.40 MEAN 3.95 MAX 14 MIN .52 AC-FT 2860

FRASER RIVER BASIN

09032100 CABIN CREEK NEAR FRASER, CO

LOCATION.--Lat 39°59'09", long 105°44'40", in NW¼SE¼ sec.2, T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on right bank 200 ft downstream from concrete diversion dam, 2.7 mi upstream from mouth and 4.6 mi northeast of Fraser.

DRAINAGE AREA.--4.87 mi^2.

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,560 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 3 to May 3. Records good except for estimated daily discharges, which are poor. Transmountain diversion upstream from station to Moffat water tunnel. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--6 years, 6.26 ft^3/s; 4,540 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 126 ft^3/s, June 13, 1984, gage height, 2.37 ft; minimum daily, 0.04 ft^3/s, May 7, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35 ft^3/s at 1900 May 20, gage height, 1.62 ft; minimum daily, 0.80 ft^3/s, Feb. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	1.8	1.4	1.2	.90	1.0	1.3	2.9	10	9.4	5.3	2.1
2	2.1	1.4	1.4	1.2	.90	1.0	1.3	2.9	11	9.0	6.1	2.0
3	2.1	2.0	1.4	1.2	.90	1.0	1.3	3.0	10	8.5	5.4	2.0
4	2.1	2.0	1.4	1.2	.80	1.0	1.3	3.3	10	8.0	4.8	1.9
5	2.0	2.2	1.4	1.2	.90	1.0	1.3	3.6	10	7.7	4.5	1.9
6	2.1	2.2	1.3	1.1	.90	1.1	1.4	5.2	10	7.3	4.4	1.9
7	2.1	2.2	1.3	1.1	.90	1.1	1.4	7.8	10	7.0	4.0	1.9
8	2.0	2.2	1.3	1.1	.90	1.1	1.4	11	11	6.7	3.8	2.0
9	2.1	2.2	1.3	1.1	.90	1.1	1.4	14	10	6.3	4.1	2.1
10	2.1	2.0	1.3	1.1	.90	1.1	1.4	15	10	6.4	4.1	2.0
11	1.9	1.9	1.3	1.1	.90	1.1	1.4	15	10	6.4	3.8	2.0
12	1.8	1.8	1.3	1.1	.94	1.1	1.4	16	11	6.5	3.9	2.2
13	1.8	1.7	1.3	1.1	.94	1.1	1.4	14	10	5.9	4.1	2.5
14	1.7	1.7	1.3	1.1	.94	1.1	1.4	12	9.9	5.4	3.8	2.3
15	1.7	1.7	1.3	1.1	.94	1.1	1.4	11	10	5.2	3.4	2.1
16	1.7	1.6	1.3	1.0	.94	1.2	1.5	12	10	4.7	3.3	1.9
17	1.6	1.5	1.3	1.0	.94	1.2	1.7	11	10	4.5	3.9	1.9
18	1.6	1.5	1.3	1.0	.94	1.2	2.5	15	10	4.4	3.6	1.8
19	1.7	1.5	1.3	1.0	.94	1.2	2.3	20	10	4.3	3.4	1.8
20	1.8	1.5	1.3	1.0	.94	1.2	2.0	24	10	4.2	3.2	2.0
21	1.7	1.5	1.3	1.0	.94	1.2	2.3	23	9.6	4.1	3.0	2.1
22	1.6	1.5	1.3	1.0	.94	1.2	2.4	23	9.1	4.0	2.9	1.9
23	1.6	1.5	1.3	1.0	.94	1.2	2.8	26	8.8	3.8	2.9	1.8
24	1.6	1.5	1.3	1.0	.94	1.2	3.5	28	9.5	3.9	2.8	1.7
25	1.5	1.5	1.3	1.0	.94	1.2	3.9	19	10	4.1	2.7	1.7
26	1.5	1.4	1.2	.90	1.0	1.3	3.6	14	10	3.8	2.6	1.7
27	1.4	1.4	1.2	.90	1.0	1.3	3.4	14	10	3.7	2.5	1.7
28	1.5	1.4	1.2	.90	1.0	1.3	3.3	15	10	4.2	2.4	1.7
29	1.5	1.4	1.2	.90	---	1.3	3.0	16	10	9.8	2.4	1.6
30	1.6	1.4	1.2	.90	---	1.3	2.9	17	9.7	5.7	2.3	1.6
31	1.6	---	1.2	.90	---	1.3	---	15	---	2.5	2.3	---
TOTAL	55.1	51.1	40.2	32.40	25.96	35.8	61.6	428.7	299.6	177.4	111.7	57.8
MEAN	1.78	1.70	1.30	1.05	.93	1.15	2.05	13.8	9.99	5.72	3.60	1.93
MAX	2.1	2.2	1.4	1.2	1.0	1.3	3.9	28	11	9.8	6.1	2.5
MIN	1.4	1.4	1.2	.90	.80	1.0	1.3	2.9	8.8	2.5	2.3	1.6
AC-FT	109	101	80	64	51	71	122	850	594	352	222	115

CAL YR 1988 TOTAL 2251.5 MEAN 6.15 MAX 64 MIN 1.1 AC-FT 4470
WTR YR 1989 TOTAL 1377.36 MEAN 3.77 MAX 28 MIN .80 AC-FT 2730

09034250 COLORADO RIVER AT WINDY GAP NEAR GRANBY, CO

LOCATION.--Lat 40°06'30", long 106°00'13" in NW¼ sec.27, R.77 W., T.2 N., Grand County, Hydrologic Unit 14010001,on right bank 300 ft downstream from county highway bridge, 1.1 mi downstream from Windy Gap diversion dam, 2.4 mi downstream from mouth of Fraser River and 3.8 mi northwest of Granby.

DRAINAGE AREA.--789 mi².

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,790 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 12 to Nov. 16, Nov. 18 to Mar. 15, and Mar. 17. Natural flow of stream affected by transmountain diversions, storage reservoirs, and diversions for irrigation. Records good except for estimated daily discharges, which are poor. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--8 years, 309 ft³/s; 223,900 acre-ft/year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,260 ft³/s, May 25, 1984, gage height, 7.34 ft; minimum daily, 42 ft³/s, Oct. 11, 2, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 371 ft³/s at 1100 Apr. 18, gage height, 3.40 ft, maximum gage height, 4.75 ft, Feb. 21 (backwater from ice); minimum daily discharge, 55 ft³/s, Sept. 26-28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	80	68	59	64	80	123	182	248	211	146	68
2	68	77	68	59	64	80	111	222	246	205	147	62
3	68	74	68	59	64	80	106	256	255	176	151	62
4	66	99	68	59	64	80	95	267	279	154	133	61
5	70	92	68	59	64	80	94	235	306	168	129	58
6	80	83	68	59	64	86	109	214	141	172	127	56
7	82	94	68	59	64	86	162	221	113	155	98	62
8	78	100	68	59	64	86	234	247	110	152	86	74
9	77	100	68	59	64	86	228	291	150	152	93	78
10	67	86	68	59	64	86	171	306	125	158	99	72
11	64	75	66	59	66	90	164	341	121	162	105	71
12	64	75	66	59	66	90	144	326	128	174	120	73
13	71	75	66	59	66	90	150	316	144	194	129	83
14	76	75	66	59	66	90	170	285	133	168	122	84
15	75	75	66	59	66	90	195	291	110	150	113	85
16	74	75	63	59	68	90	247	289	111	162	107	78
17	72	72	63	59	68	90	280	278	223	153	111	68
18	69	72	63	59	68	90	325	240	244	146	108	63
19	67	72	63	59	68	91	283	260	234	140	105	61
20	68	72	63	59	68	91	261	279	234	138	106	61
21	68	72	62	59	68	89	264	305	223	141	102	62
22	68	72	62	59	110	90	273	316	245	178	97	63
23	68	72	62	59	68	101	255	324	237	178	93	61
24	69	72	62	59	68	123	267	335	236	179	91	59
25	68	72	62	59	68	133	265	347	232	190	97	58
26	68	68	62	59	70	159	248	305	233	199	92	55
27	68	68	62	59	70	169	239	230	228	177	90	55
28	68	68	62	59	70	171	223	269	230	170	82	55
29	68	68	62	59	---	178	205	256	226	200	72	57
30	68	68	62	59	---	138	184	249	217	238	66	58
31	73	---	62	59	---	108	---	253	---	191	70	---
TOTAL	2176	2323	2007	1829	1902	3191	6075	8535	5962	5331	3287	1963
MEAN	70.2	77.4	64.7	59.0	67.9	103	202	277	199	172	106	65.4
MAX	82	100	68	59	110	178	325	347	306	238	151	85
MIN	64	68	62	59	64	80	94	182	110	138	66	55
AC-FT	4320	4610	3980	3630	3770	6330	12050	17030	11830	10570	6520	3890

CAL YR 1988 TOTAL 60113 MEAN 164 MAX 1340 MIN 62 AC-FT 119200
WTR YR 1989 TOTAL 44631 MEAN 122 MAX 347 MIN 55 AC-FT 88530

09034500 COLORADO RIVER AT HOT SULPHUR SPRINGS, CO

LOCATION.--Lat 40°05'00", long 106°05'15", in NE¼NE¼ sec.2, T.1 N., R.78W., Grand County, Hydrologic Unit 14010001, on left bank about 1,000 ft north of U.S. Highway 40, 1 mi northeast of Hot Sulphur Springs, and 4.5 mi upstream from Beaver Creek.

DRAINAGE AREA.--825 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1904 to current year. Monthly discharge only for some periods, published in WSP 1313. Prior to 1907 and 1914-18, published as Grand River at Hot Sulphur Springs, and as Grand River at Sulphur Springs 1907-13.

REVISED RECORDS.--WSP 1313: 1905. WSP 1924: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,670 ft, from railroad elevations. July 28, 1904, to Apr. 16, 1906, nonrecording gage on bridge 1.7 mi downstream at different datum. Apr. 17, 1906, to Sept. 18, 1930, nonrecording gage at bridge 1.4 mi downstream at datum 7,651.26 ft, National Geodetic Vertical Datum of 1929. Supplemental water-stage recorder (nonrecording gage prior to Jan. 1, 1963) at different datum at site 1.7 mi downstream, used for winter records some years.

REMARKS.--Estimated daily discharges: Nov. 12 to Apr. 17 and Sept. 22-30. Records good except for estimated daily discharges, which are poor. Flow affected by transmountain diversions, storage reservoirs, and diversions upstream from station for irrigation of about 13,000 acres.

AVERAGE DISCHARGE.--39 years (1905-09, 1911-47), 675 ft³/s; 489,000 acre-ft, prior to storage by Lake Granby; 36 years (1954-89), 243 ft³/s; 176,100 acre-ft, subsequent to storage by Lake Granby.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 10,300 ft³/s, June 15, 1921, gage height, 8.7 ft, site and datum then in use; minimum daily, 33 ft³/s, Sept. 27, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 393 ft³/s at 1300 May 12, gage height, 1.34 ft, maximum gage height, 2.36 ft at 1300 Mar. 24 (backwater from ice); minimum daily discharge, 55 ft³/s, Sept. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	83	72	59	64	80	143	206	274	229	180	69
2	69	81	72	59	64	80	131	243	271	228	172	61
3	67	79	72	59	64	80	126	281	279	198	178	56
4	69	99	72	59	64	80	115	302	302	174	162	61
5	70	95	72	59	64	80	114	268	327	182	157	57
6	76	87	72	59	64	90	129	238	182	195	155	56
7	81	93	72	59	64	90	182	245	134	176	115	55
8	75	100	72	59	64	90	254	274	122	170	94	68
9	74	100	72	59	64	90	243	320	169	157	103	76
10	69	91	72	59	64	90	197	340	142	171	106	71
11	65	77	68	59	66	100	184	370	137	158	116	67
12	66	80	68	59	66	100	164	361	137	177	127	70
13	70	80	68	59	66	100	170	351	158	205	138	81
14	77	80	68	59	66	100	190	320	151	189	125	84
15	78	80	68	59	66	100	215	323	126	156	117	82
16	78	72	65	59	68	100	267	316	121	169	106	79
17	78	72	65	59	68	100	300	305	231	169	110	60
18	76	72	65	59	68	100	307	266	271	165	112	61
19	72	72	65	59	68	100	286	279	262	164	103	61
20	72	72	65	59	68	100	271	299	261	165	108	58
21	72	72	63	59	68	100	279	326	249	178	105	61
22	72	72	63	59	110	100	295	343	267	220	94	63
23	72	72	63	59	68	120	283	353	256	218	89	62
24	73	72	63	59	68	140	295	364	253	224	86	60
25	72	72	63	59	68	165	303	377	250	238	94	60
26	72	72	63	59	70	180	292	339	253	251	93	60
27	72	72	63	59	70	185	282	311	247	224	83	60
28	72	72	63	59	70	190	264	298	251	221	81	60
29	72	72	63	59	---	202	238	286	251	250	71	60
30	72	72	63	59	---	160	213	278	238	293	63	60
31	75	---	63	59	---	132	---	279	---	243	62	---
TOTAL	2245	2385	2078	1829	1902	3524	6737	9461	6572	6157	3505	1939
MEAN	72.4	79.5	67.0	59.0	67.9	114	225	305	219	199	113	64.6
MAX	81	100	72	59	110	202	307	377	327	293	180	84
MIN	65	72	63	59	64	80	114	206	121	156	62	55
AC-FT	4450	4730	4120	3630	3770	6990	13360	18770	13040	12210	6950	3850

CAL YR 1988 TOTAL 63759 MEAN 174 MAX 1330 MIN 60 AC-FT 126500
WTR YR 1989 TOTAL 48334 MEAN 132 MAX 377 MIN 55 AC-FT 95870

09034500 COLORADO RIVER AT HOT SULPHUR SPRINGS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1947 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1947 to current year.
WATER TEMPERATURE: April 1949 to current year.

REMARKS.--Limited temperature data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 524 microsiemens, Dec. 24, 1986; minimum daily, 48 microsiemens, June 2, 1947.
WATER TEMPERATURE: Maximum daily, 29°C, Aug. 3, 1981; minimum daily, freezing point on many days during winter months each year.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 182 microsiemens, Mar. 28; minimum daily, 95 microsiemens, May 12.
WATER TEMPERATURE: Maximum daily, 22°C, July 19 and Aug. 11; minimum daily, freezing point on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
DEC 05...	1300	74	134	8.6	0.0	--	58	18	3.2
MAR 28...	1520	194	164	8.2	5.5	9.0	63	19	3.7
JUN 22...	1030	273	152	8.3	14.0	7.6	--	--	--
SEP 21...	1120	63	142	8.6	10.5	9.6	58	18	3.2

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
DEC 05...	6.9	0.4	1.3	64	7.4	1.8	0.3	11	89
MAR 28...	8.2	0.5	2.7	66	14	3.5	0.2	12	104
JUN 22...	--	--	--	--	--	--	0.2	--	--
SEP 21...	7.3	0.4	1.1	67	6.0	2.0	0.2	11	89

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)
DEC 05...	0.12	17.8	4	0.10	0.16	0.2	0.2	0.03	0.03
MAR 28...	0.14	54.5	21	0.20	0.21	0.5	0.5	0.11	0.10
JUN 22...	--	--	4	<0.10	<0.10	0.3	0.2	0.03	0.02
SEP 21...	0.12	15.1	1	<0.10	<0.10	0.3	0.2	0.03	<0.01

DATE	ANTI-MONY, DIS-SOLVED (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)
DEC 05...	<1	<1	<1	20	<0.5	<1	<1	<1	<1
MAR 28...	<1	1	<1	18	<0.5	<1	<1	3	2
JUN 22...	<1	<1	<1	11	3	<1	<1	<1	1
SEP 21...	<1	<1	--	20	<0.5	1	<1	<1	<1

09034500 COLORADO RIVER AT HOT SULPHUR SPRINGS, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)
DEC								
05...	4	--	72	<5	<5	15	<0.1	<0.1
MAR								
28...	3	2	170	<5	<5	45	<0.1	<0.1
JUN								
22...	5	5	--	2	1	--	<0.1	<0.1
SEP								
21...	10	1	58	8	1	15	<0.1	<0.1

DATE	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
DEC								
05...	<1	--	<1	<1	1	<1.0	10	11
MAR								
28...	4	1	<1	<1	<1	<1.0	<10	3
JUN								
22...	2	1	<1	<1	<1	<1.0	<10	7
SEP								
21...	5	1	<1	<1	<1	<1.0	<10	<3

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
ONCE DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	143	143	144	143	126	145	167	118	136	156	151	141
2	144	139	146	134	123	146	166	116	140	158	154	137
3	145	151	149	143	105	144	169	113	140	157	---	138
4	146	148	139	142	106	144	170	115	140	160	153	141
5	145	147	148	143	130	144	171	116	143	159	150	145
6	144	149	144	137	134	150	175	119	146	166	153	144
7	143	150	145	115	132	140	166	113	150	163	152	141
8	145	149	146	145	135	145	163	110	154	164	146	139
9	144	143	144	138	132	142	166	106	158	161	146	137
10	145	142	145	141	131	148	159	100	162	162	143	139
11	147	142	137	---	---	149	162	99	162	158	140	140
12	146	141	142	143	139	161	162	95	166	158	141	139
13	142	139	140	102	140	150	162	97	160	158	142	142
14	140	138	138	146	140	150	163	98	166	165	140	139
15	140	139	140	113	141	156	161	103	162	162	139	134
16	145	140	140	134	139	153	147	110	164	156	141	135
17	147	148	139	128	137	155	148	108	160	167	140	136
18	146	135	139	140	138	153	143	111	160	156	138	144
19	153	137	141	150	131	176	136	107	160	153	133	140
20	148	134	142	144	122	167	129	106	162	154	134	144
21	150	142	142	137	140	178	124	106	142	151	132	148
22	152	154	145	140	144	169	123	108	140	152	134	147
23	151	149	140	140	141	162	118	107	140	157	134	146
24	149	137	141	144	112	171	115	109	140	154	136	147
25	149	135	141	142	113	179	114	113	138	154	136	147
26	151	138	138	144	147	176	109	118	138	156	134	152
27	142	147	140	129	144	173	106	131	138	157	135	149
28	138	134	141	108	146	182	106	132	140	153	130	151
29	138	145	141	123	---	167	108	134	140	155	134	151
30	141	142	142	124	---	167	116	134	140	148	132	152
31	143	---	139	127	---	171	---	138	---	150	137	---
MEAN	145	143	142	---	---	158	144	113	150	157	---	143

09034500 COLORADO RIVER AT HOT SULPHUR SPRINGS, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
ONCE DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	1.0	.0	.0	.0	.0	5.0	7.0	12.0	18.0	20.0	17.0
2	11.0	5.0	.0	.0	.0	.0	4.0	9.0	16.0	19.0	19.0	17.0
3	12.0	5.0	.0	.0	.0	.0	4.0	9.0	14.0	20.0	---	16.0
4	7.0	5.0	.0	.0	.0	.0	6.0	6.0	13.0	20.0	19.0	17.0
5	10.0	5.0	.0	.0	.0	.0	5.0	9.0	14.0	21.0	21.0	17.0
6	10.0	5.0	.0	.0	.0	.0	7.0	7.0	11.0	20.0	18.0	18.0
7	12.0	4.0	.0	.0	.0	.0	7.0	9.0	15.0	21.0	17.0	19.0
8	11.0	2.0	.0	.0	.0	.0	7.0	12.0	14.0	18.0	19.0	13.0
9	11.0	4.0	.0	.0	.0	.0	10.0	11.0	14.0	22.0	18.0	17.0
10	12.0	2.0	.0	.0	.0	.0	4.0	12.0	14.0	18.0	21.0	16.0
11	12.0	2.0	.0	.0	---	.0	7.0	12.0	18.0	16.0	22.0	14.0
12	10.0	3.0	.0	.0	.0	.0	7.0	12.0	16.0	16.0	19.0	14.0
13	10.0	5.0	.0	.0	.0	.0	6.0	8.0	18.0	19.0	18.0	9.0
14	11.0	1.0	.0	.0	.0	.0	8.0	8.0	14.0	17.0	19.0	13.0
15	11.0	3.0	.0	.0	.0	.0	3.0	8.0	15.0	16.0	20.0	14.0
16	10.0	1.0	.0	.0	.0	.0	8.0	8.0	12.0	21.0	18.0	15.0
17	10.0	.0	.0	.0	.0	.0	6.0	11.0	16.0	18.0	16.0	16.0
18	10.0	1.0	.0	.0	.0	1.0	9.0	12.0	17.0	18.0	18.0	13.0
19	6.0	1.0	.0	.0	.0	1.0	7.0	17.0	16.0	22.0	19.0	16.0
20	7.0	.0	.0	.0	.0	1.0	8.0	16.0	16.0	18.0	20.0	14.0
21	10.0	.0	.0	.0	.0	1.0	14.0	12.0	12.0	19.0	18.0	11.0
22	8.0	.0	.0	.0	.0	4.0	8.0	15.0	16.0	17.0	20.0	14.0
23	9.0	1.0	.0	.0	.0	3.0	14.0	16.0	15.0	18.0	20.0	14.0
24	9.0	.0	.0	.0	.0	2.0	12.0	12.0	15.0	17.0	18.0	16.0
25	8.0	.0	.0	.0	.0	4.0	8.0	13.0	14.0	17.0	17.0	16.0
26	4.0	.0	.0	.0	.0	1.0	12.0	14.0	16.0	18.0	20.0	16.0
27	4.0	.0	.0	.0	.0	4.0	8.0	13.0	19.0	18.0	17.0	16.0
28	7.0	.0	.0	.0	.0	5.0	8.0	13.0	17.0	18.0	20.0	13.0
29	7.0	.0	.0	.0	---	3.0	8.0	16.0	17.0	17.0	18.0	17.0
30	8.0	.0	.0	.0	---	5.0	9.0	13.0	18.0	19.0	19.0	15.0
31	5.0	---	.0	.0	---	.0	---	16.0	---	20.0	16.0	---
MEAN	9.0	1.9	.0	.0	---	1.1	7.6	11.5	15.1	18.6	---	15.1

09034900 BOBTAIL CREEK NEAR JONES PASS, CO

LOCATION.--Lat 39°45'37", long 105°54'21", in sec.28, T.3 S., R.76 W., Grand County, Hydrologic Unit 14010001,on left bank 320 ft upstream from diversion dam and 0.4 mi south of entrance to August P. Gumlick Tunnel.

DRAINAGE AREA.--5.49 mi².

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 10,430 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 20 to Nov. 8, Nov. 11 to May 11, and Sept. 27-30. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--24 years, 10.3 ft³/s; 7,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 290 ft³/s, June 28, 1988, gage height, 5.19 ft; maximum recorded gage height, 7.57 ft, May 15, 1984 (backwater from ice); minimum daily discharge, 0.44 ft³/s, Feb. 11, 1972.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 90 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
June 16	1800	*96	*4.17	No other peak greater than base discharge.			

Minimum daily, 0.57 ft³/s, Mar. 27-31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	1.5	1.3	1.1	1.0	.84	.58	4.6	60	33	19	4.0
2	2.4	1.5	1.3	1.1	1.0	.84	.58	5.0	54	31	20	3.9
3	2.2	1.5	1.3	1.1	.98	.82	.58	4.9	46	30	17	3.7
4	2.0	1.4	1.3	1.1	.98	.80	.58	4.7	39	30	14	3.5
5	2.6	1.4	1.3	1.1	.98	.80	.64	4.6	41	30	13	3.5
6	2.4	1.4	1.3	1.1	.98	.78	.77	5.4	44	29	13	3.4
7	2.3	1.4	1.3	1.1	.97	.78	.82	6.8	44	27	12	3.4
8	2.1	1.4	1.2	1.1	.96	.76	.82	9.4	47	26	9.3	3.4
9	2.1	1.2	1.2	1.1	.96	.76	.76	12	44	25	9.6	3.3
10	2.6	1.3	1.2	1.1	.96	.74	.79	13	42	26	11	3.3
11	2.3	1.3	1.2	1.1	.96	.74	.75	15	43	29	12	3.2
12	2.1	1.3	1.2	1.1	.95	.72	.79	14	45	25	11	3.8
13	1.8	1.3	1.2	1.1	.94	.72	.82	11	39	24	11	3.9
14	1.8	1.3	1.2	1.1	.94	.70	.93	9.5	47	21	7.7	3.8
15	1.7	1.3	1.2	1.1	.94	.70	1.1	7.5	53	19	7.2	3.4
16	1.7	1.3	1.2	1.1	.94	.68	1.3	7.2	63	18	7.8	3.1
17	1.6	1.3	1.2	1.1	.94	.68	1.5	6.9	58	17	8.8	2.9
18	1.6	1.3	1.2	1.1	.93	.66	1.8	12	63	15	7.1	2.7
19	1.6	1.3	1.2	1.0	.92	.64	2.0	22	57	16	6.3	2.7
20	1.6	1.3	1.2	1.0	.92	.64	2.2	27	61	15	6.6	3.2
21	1.6	1.3	1.2	1.0	.92	.62	3.3	28	49	15	6.2	2.8
22	1.6	1.3	1.2	1.0	.92	.62	4.7	33	39	12	5.4	2.6
23	1.6	1.3	1.2	1.0	.90	.61	5.0	42	34	15	6.3	2.5
24	1.6	1.3	1.2	1.0	.90	.60	6.1	44	37	14	5.7	2.4
25	1.6	1.3	1.2	1.0	.91	.58	6.4	38	32	15	5.0	2.3
26	1.6	1.3	1.2	1.0	.89	.58	6.3	33	31	13	5.0	2.3
27	1.6	1.3	1.2	1.0	.87	.57	7.0	37	32	12	5.3	2.3
28	1.5	1.3	1.2	1.0	.86	.57	6.5	49	33	14	4.7	2.2
29	1.5	1.3	1.1	1.0	---	.57	5.2	60	33	24	4.4	2.1
30	1.5	1.3	1.1	1.0	---	.57	5.0	66	33	26	4.2	2.1
31	1.5	---	1.1	1.0	---	.57	---	68	---	19	4.3	---
TOTAL	58.3	40.0	37.6	32.8	26.27	21.25	75.38	697.3	1334	669	281.5	91.6
MEAN	1.88	1.33	1.21	1.06	.94	.69	2.51	22.5	44.5	21.6	9.08	3.05
MAX	2.6	1.5	1.3	1.1	1.0	.84	7.0	68	63	33	20	4.0
MIN	1.5	1.2	1.1	1.0	.86	.57	.58	4.6	31	12	4.2	2.1
AC-FT	116	79	75	65	52	42	150	1380	2650	1330	558	182

CAL YR 1988 TOTAL 3934.94 MEAN 10.8 MAX 122 MIN .78 AC-FT 7800
WTR YR 1989 TOTAL 3365.09 MEAN 9.22 MAX 68 MIN .57 AC-FT 6670

09035500 WILLIAMS FORK BELOW STEELMAN CREEK, CO

LOCATION.--Lat 39°46'44", long 105°55'40", in sec.20, T.3 S., R.75 W., Grand County, Hydrologic Unit 14010001, on right bank 700 ft downstream from Steelman Creek and 6.5 mi southeast of Leal.

DRAINAGE AREA.--16.3 mi^2.

PERIOD OF RECORD.--July 1933 to September 1941, published as Williams River below Steelman Creek, October 1965 to current year. Monthly discharge only for some periods, published in WSP 1313.

GAGE.--Water-stage recorder. Elevation of gage is 9,800 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 21, 1933, nonrecording gage, and July 21, 1933, to Sept. 30, 1941, water-stage recorder at site 600 ft upstream at different datum.

REMARKS.--Estimated daily discharges: Nov. 12 to May 11. Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station through August P. Gumlick Tunnel (station 09036000) since May 10, 1940. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--32 years, 26.0 ft^3/s; 18,840 acre-ft/yr, including diversions to August P. Gumlick Tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 441 ft^3/s, June 21, 1938, gage height, 2.48 ft, site and datum then in use, from rating curve extended above 260 ft^3/s; maximum gage height, 6.96 ft, May 15, 1984 (backwater from ice); minimum daily discharge, 0.20 ft^3/s, Mar. 6, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 160 ft^3/s at 1700 June 19, gage height 4.83 ft; minimum daily, 0.47 ft^3/s, Feb. 15-25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.69	.95	.56	.52	.49	.48	.90	2.5	12	74	39	10
2	.66	1.2	.56	.50	.49	.48	.76	2.6	11	70	43	9.8
3	.63	.87	.54	.50	.49	.48	.76	2.6	10	39	34	9.4
4	.61	4.9	.54	.50	.48	.48	.80	2.5	9.7	3.3	31	9.1
5	.80	2.4	.54	.50	.48	.48	.90	2.5	21	24	28	8.9
6	.77	.84	.54	.50	.48	.48	1.0	4.0	9.2	53	27	8.7
7	.68	.75	.54	.50	.48	.48	1.1	6.0	9.0	58	25	8.4
8	.66	2.6	.54	.50	.48	.48	1.2	7.0	9.1	54	23	8.8
9	3.6	.86	.54	.50	.48	.48	1.1	8.5	9.1	50	22	9.0
10	5.7	.75	.54	.50	.48	.48	1.0	10	8.8	50	24	9.0
11	5.4	.70	.54	.50	.48	.48	1.0	12	8.9	57	26	8.8
12	5.1	.64	.54	.50	.48	.48	1.0	11	46	63	27	11
13	5.1	.61	.52	.50	.48	.48	1.2	8.6	8.9	53	25	11
14	2.7	.58	.52	.50	.48	.48	1.4	7.1	8.2	48	22	10
15	.73	.58	.52	.50	.47	.48	1.6	11	7.7	43	20	9.0
16	.68	.58	.52	.50	.47	.48	1.9	7.0	17	39	20	8.1
17	.64	.58	.52	.50	.47	.48	2.2	6.6	12	35	22	7.6
18	.65	.58	.52	.50	.47	.48	2.6	8.7	13	33	20	7.3
19	.72	.58	.52	.50	.47	.48	3.0	10	65	30	20	7.1
20	.73	.58	.52	.50	.47	.48	3.6	12	7.7	29	19	8.4
21	.69	.58	.52	.50	.47	.48	4.3	12	53	28	18	7.9
22	.66	.56	.52	.50	.47	.50	5.0	22	98	27	16	5.6
23	.63	.56	.52	.50	.47	.54	6.0	16	87	34	16	.99
24	.67	.56	.52	.49	.47	.60	6.8	15	81	32	15	.83
25	.67	.56	.52	.49	.47	.64	6.8	13	79	31	14	.78
26	.64	.56	.52	.49	.48	.66	6.6	11	41	28	14	.73
27	.62	.56	.52	.49	.48	.66	6.8	12	4.5	27	13	.70
28	.65	.56	.52	.49	.48	.80	6.0	13	4.2	30	12	.67
29	.65	.56	.52	.49	---	.90	5.4	25	4.0	50	12	.64
30	.72	.56	.52	.49	---	.76	4.7	37	43	47	11	.57
31	1.8	---	.52	.49	---	.76	---	15	---	35	11	---
TOTAL	45.65	27.75	16.40	15.44	13.36	16.90	87.42	333.2	798.0	1274.3	669	198.81
MEAN	1.47	.92	.53	.50	.48	.55	2.91	10.7	26.6	41.1	21.6	6.63
MAX	5.7	4.9	.56	.52	.49	.90	6.8	37	98	74	43	11
MIN	.61	.56	.52	.49	.47	.48	.76	2.5	4.0	3.3	11	.57
AC-FT	91	55	33	31	26	34	173	661	1580	2530	1330	394

CAL YR 1988	TOTAL 6468.74	MEAN 17.7	MAX 210	MIN .52	AC-FT 12830
WTR YR 1989	TOTAL 3496.23	MEAN 9.58	MAX 98	MIN .47	AC-FT 6930

09035700 WILLIAMS FORK ABOVE DARLING CREEK, NEAR LEAL, CO

LOCATION.--Lat 39°47'22", long 106°01'18", in NW¼SW¼ sec.16, T.3 S., R.77 W., Grand County, Hydrologic Unit 14010001, on left bank 1.0 mi upstream from Darling Creek and 1.9 mi southeast of Leal.

DRAINAGE AREA.--34.7 mi².

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,970 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1972, May 6, 1981 to Jan. 31, 1983, at site 0.6 mi downstream at different datum.

REMARKS.--Estimated daily discharges: Nov. 9, and Nov. 15 to Apr. 14. Records good except for estimated daily discharges, which are poor. Transmountain diversion upstream from station through August P. Gumlick Tunnel (station 09036000). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--24 years, 37.4 ft³/s; 27,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 677 ft³/s, June 24, 1971, gage height, 7.12 ft, site and datum then in use, from rating curve extended above 430 ft³/s; minimum daily, 2.7 ft³/s, Apr. 5, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 203 ft³/s at 1900 June 19, gage height, 3.88 ft; minimum daily, 4.5 ft³/s, Feb. 8-14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	7.4	6.0	5.1	5.0	5.0	6.0	18	76	111	56	19
2	7.6	7.4	6.0	5.0	5.0	5.0	6.0	18	69	106	70	19
3	7.6	7.3	6.0	5.0	5.0	5.0	6.0	18	64	78	54	18
4	7.6	7.3	6.0	5.0	5.0	5.0	6.0	17	57	30	49	18
5	7.9	7.3	6.0	5.0	5.0	5.0	6.2	18	70	42	46	17
6	7.8	7.4	6.0	5.0	4.8	5.0	6.4	20	62	77	44	17
7	7.6	7.5	6.0	5.0	4.6	5.0	6.7	23	61	84	42	16
8	7.6	7.6	6.0	5.0	4.5	5.0	7.0	28	66	78	40	16
9	8.7	7.8	6.0	5.0	4.5	5.0	7.0	32	61	71	38	16
10	12	8.0	6.0	5.0	4.5	5.0	7.0	34	60	69	42	16
11	12	7.6	6.0	5.0	4.5	5.0	7.0	44	62	84	43	16
12	11	7.3	6.0	5.0	4.5	5.0	7.0	35	100	96	45	17
13	11	7.3	6.0	5.0	4.5	5.0	7.8	31	61	77	43	18
14	10	6.9	6.0	5.0	4.5	5.0	8.6	29	60	66	39	17
15	7.6	7.6	6.0	5.0	4.7	5.0	9.9	30	63	59	36	16
16	7.6	7.8	6.0	5.0	4.8	5.0	12	28	77	52	36	15
17	7.6	7.6	6.0	5.0	5.0	5.0	13	28	92	46	35	14
18	7.6	7.2	6.0	5.0	5.0	5.0	16	30	74	42	31	13
19	7.6	7.0	6.0	5.0	5.0	5.0	17	36	123	39	30	13
20	7.6	7.0	6.0	5.0	5.0	5.0	19	43	75	43	30	14
21	7.6	7.0	6.0	5.0	5.0	5.0	21	47	98	47	27	14
22	7.6	7.0	6.0	5.0	5.0	5.0	23	65	147	47	26	13
23	7.6	7.0	6.0	5.0	5.0	5.0	24	67	134	57	25	8.8
24	7.6	7.0	6.0	5.0	5.0	5.2	25	72	127	54	25	8.0
25	7.6	7.0	6.0	5.0	5.0	5.3	25	61	124	51	24	7.7
26	7.6	6.8	6.0	5.0	5.0	5.4	27	51	91	49	24	7.7
27	7.6	6.8	5.8	5.0	5.0	5.6	34	54	38	45	23	7.7
28	7.4	6.6	5.7	5.0	5.0	5.7	23	68	37	50	22	7.7
29	7.3	6.4	5.6	5.0	---	5.8	19	89	36	73	22	7.7
30	7.3	6.2	5.4	5.0	---	6.0	18	108	67	73	21	7.7
31	7.5	---	5.2	5.0	---	6.0	---	83	---	55	20	---
TOTAL	254.3	216.1	183.7	155.1	135.4	160.0	420.6	1325	2322	1951	1108	415.0
MEAN	8.20	7.20	5.93	5.00	4.84	5.16	14.0	42.7	77.4	62.9	35.7	13.8
MAX	12	8.0	6.0	5.1	5.0	6.0	34	108	147	111	70	19
MIN	7.3	6.2	5.2	5.0	4.5	5.0	6.0	17	36	30	20	7.7
AC-FT	504	429	364	308	269	317	834	2630	4610	3870	2200	823

CAL YR 1988 TOTAL 13051.0 MEAN 35.7 MAX 324 MIN 4.8 AC-FT 25890
WTR YR 1989 TOTAL 8646.2 MEAN 23.7 MAX 147 MIN 4.5 AC-FT 17150

09035800 DARLING CREEK NEAR LEAL, CO

LOCATION.--Lat 39°48'20", long 106°01'05", in NE¼SW¼ sec.9, T.3 S., R.77 W., Grand County, Hydrologic Unit 14010001, on left bank 0.6 mi upstream from mouth and 1.4 mi southeast of Leal.

DRAINAGE AREA.--8.21 mi².

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,090 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 16 to Apr. 14. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--24 years, 9.69 ft³/s; 7,020 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 241 ft³/s, June 30, 1984, gage height, 4.30 ft, from rating curve extended above 100 ft³/s; minimum daily, 1.0 ft³/s, Jan. 12, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 49 ft³/s at 1800 May 29, gage height, 3.33 ft; minimum daily, 1.3 ft³/s, Mar. 19-27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	3.5	2.0	2.0	1.5	1.5	1.5	4.6	34	14	7.6	4.1
2	3.8	3.6	2.0	2.0	1.5	1.5	1.5	4.5	32	14	8.3	4.0
3	3.8	3.5	2.0	2.0	1.5	1.5	1.5	4.5	28	13	7.3	4.0
4	3.8	3.6	2.0	2.0	1.5	1.5	1.5	4.4	25	12	7.0	4.0
5	4.0	3.7	2.0	2.0	1.5	1.5	1.5	4.4	25	12	6.7	4.0
6	3.8	3.7	2.0	2.0	1.5	1.5	1.6	5.1	25	11	6.6	3.9
7	3.7	3.7	2.0	2.0	1.5	1.5	1.7	6.4	26	11	6.5	3.8
8	3.7	3.7	2.0	1.9	1.5	1.5	1.9	8.5	24	10	6.3	3.9
9	3.7	3.6	2.0	1.9	1.5	1.5	[illegible]	10	22	9.5	6.3	3.9
10	3.7	3.7	2.0	1.8	1.5	1.5	[illegible]	11	21	9.3	6.4	3.9
11	3.7	3.7	2.0	1.8	1.5	1.5	[illegible]	12	23	11	6.4	3.9
12	3.7	3.6	2.0	1.7	1.5	1.5	[illegible]	[illegible]	23	[illegible]	6.7	4.2
13	3.7	3.7	2.0	1.7	1.5	1.5	[illegible]	11	[illegible]	[illegible]	6.5	[illegible]
14	3.7	3.7	2.0	1.7	1.5	1.5	[illegible]	9.3	[illegible]	8.9	6.2	4.0
15	3.7	3.7	2.0	1.6	1.5	1.5	[illegible]	[illegible]	[illegible]	8.6	6.0	3.8
16	3.7	3.4	2.0	1.6	1.5	1.5	5.7	[illegible]	29	8.2	5.9	3.8
17	3.6	3.1	2.0	1.5	1.5	1.4	[illegible]	7.9	30	7.8	5.8	3.7
18	3.6	2.9	2.0	1.5	1.5	1.4	4.3	[illegible]	29	7.6	5.4	3.6
19	3.7	2.7	2.0	1.5	1.5	1.3	[illegible]	14	30	7.4	5.6	3.5
20	3.7	2.5	2.0	1.5	1.5	1.3	4.8	[illegible]	29	7.2	5.4	3.7
21	3.7	2.5	2.0	1.5	1.5	1.3	5.7	[illegible]	26	7.3	5.0	3.5
22	3.6	[illegible]	2.0	1.5	1.5	1.3	[illegible]	[illegible]	[illegible]	7.3	4.8	3.6
23	3.6	[illegible]	2.0	1.5	1.5	1.3	[illegible]	29	25	7.8	4.8	3.5
24	3.6	[illegible]	2.0	1.5	1.5	1.3	[illegible]	31	19	7.9	4.7	3.5
25	3.6	[illegible]	2.0	1.5	1.5	1.3	[illegible]	[illegible]	17	7.4	4.6	3.5
26	3.5	[illegible]	2.0	1.5	1.5	1.3	6.8	[illegible]	17	7.3	4.5	3.4
27	3.6	[illegible]	2.0	1.5	1.5	1.3	[illegible]	24	16	7.3	4.4	3.4
28	3.5	[illegible]	2.0	1.5	1.5	1.4	[illegible]	[illegible]	[illegible]	7.7	4.3	3.4
29	3.6	2.2	2.0	1.5	---	1.4	[illegible]	[illegible]	[illegible]	[illegible]	4.3	3.4
30	3.7	2.1	2.0	1.5	---	1.5	4.6	37	15	[illegible]	[illegible]	3.4
31	[illegible]	---	2.0	1.5	---	1.5	---	[illegible]	---	[illegible]	[illegible]	---
TOTAL	114.4	93.0	62.0	52.2	42.0	44.3	112.9	491.3	706	290.8	178.9	112.6
MEAN	3.69	3.10	2.00	1.69	1.50	1.43	3.76	15.9	23.5	9.38	5.77	3.75
MAX	4.0	3.7	2.0	2.0	1.5	1.5	7.2	37	34	14	8.3	4.2
MIN	3.5	2.1	2.0	1.5	1.5	1.3	1.5	4.4	15	7.2	4.2	3.4
AC-FT	227	184	123	104	83	88	224	976	1400	577	355	223

CAL YR 1988 TOTAL 3327.3 MEAN 9.09 MAX 76 MIN 1.3 AC-FT 6600
WTR YR 1989 TOTAL 2300.9 MEAN 6.30 MAX 37 MIN 1.3 AC-FT 4560

09035900 SOUTH FORK WILLIAMS FORK NEAR LEAL, CO

LOCATION.--Lat 39°47'45", long 106°01'48", in NE¼ sec.17, T.3 S., R.77 W., Grand County, Hydrologic Unit 14010001, on left bank 800 ft upstream from highway bridge, 0.6 mi upstream from mouth, and 1.2 mi southeast of Leal.

DRAINAGE AREA.--27.3 mi².

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,950 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 6, and Nov. 9 to May 5. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--24 years, 32.7 ft³/s; 23,690 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 464 ft³/s, June 15, 1978, gage height 3.37 ft; maximum gage height, 4.22 ft, Nov. 22, 1979 (backwater from ice); minimum daily discharge, 2.6 ft³/s, Mar. 6, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 29	2000	*232	*3.56	No other peak greater than base discharge.			

Minimum daily, 6.5 ft³/s, Feb. 6-14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	9.2	8.2	7.0	7.0	7.0	10	19	158	75	31	15
2	11	9.6	8.0	7.0	7.0	7.0	10	19	151	71	36	15
3	11	10	7.8	7.0	7.0	7.0	10	18	140	67	31	15
4	11	8.8	7.6	7.0	7.0	7.0	15	18	122	66	29	14
5	12	10	7.4	7.0	6.8	7.0	11	13	121	63	33	14
6	13	10	7.2	7.0	6.5	7.0	12	19	129	61	27	14
7	12	10	7.0	7.0	6.5	7.0	13	26	126	57	26	13
8	11	10	7.0	7.0	6.5	7.0	14	39	131	54	25	14
9	11	10	7.0	7.0	6.5	7.0	14	52	128	53	25	14
10	11	10	7.0	7.0	6.5	7.0	14	62	121	49	26	14
11	11	10	7.0	7.0	6.5	7.0	14	65	125	54	27	14
12	11	10	7.0	7.0	6.5	7.0	14	62	131	66	29	13
13	11	10	7.0	7.0	6.5	7.0	15	51	121	55	27	17
14	11	10	7.0	7.0	6.5	7.0	17	44	119	48	25	16
15	10	10	7.0	7.0	6.8	7.0	19	38	132	45	23	15
16	9.9	10	7.0	7.0	7.0	7.0	21	36	162	41	22	14
17	9.9	10	7.0	7.0	7.0	7.0	23	35	173	38	22	14
18	9.9	10	7.0	7.0	7.0	7.0	25	43	158	36	22	13
19	10	10	7.0	7.0	7.1	7.0	27	61	163	35	21	13
20	10	10	7.0	7.0	7.0	7.0	30	77	162	33	23	15
21	11	10	7.0	7.0	7.0	7.0	33	39	142	32	23	14
22	10	10	7.0	7.0	7.0	7.3	37	95	114	33	19	13
23	9.7	10	7.0	7.0	7.0	7.6	43	175	99	35	19	13
24	9.6	10	7.0	7.0	7.0	8.0	45	142	97	34	19	13
25	9.4	9.7	7.0	7.0	7.0	8.4	45	129	88	31	17	12
26	9.3	9.5	7.0	7.0	7.0	8.8	45	107	84	33	17	12
27	9.3	9.2	7.0	7.0	7.0	9.2	45	116	81	30	17	12
28	8.9	9.0	7.0	7.0	7.0	9.7	35	144	80	33	16	12
29	9.6	8.6	7.0	7.0	---	10	20	170	80	42	16	12
30	10	8.5	7.0	7.0	---	10	19	177	78	38	15	12
31	9.7	---	7.0	7.0	---	10	---	165	---	32	15	---
TOTAL	325.2	292.1	221.2	217.0	191.1	236.0	687	2263	3703	1442	715	412
MEAN	10.5	9.74	7.14	7.00	6.82	7.61	22.9	73.0	123	46.5	23.1	13.7
MAX	13	10	8.2	7.0	7.0	10	45	177	173	75	36	17
MIN	8.9	8.5	7.0	7.0	6.5	7.0	10	13	78	30	15	12
AC-FT	645	579	439	430	379	468	1360	4490	7340	2860	1420	817

CAL YR 1988 TOTAL 11935.6 MEAN 32.7 MAX 302 MIN 5.6 AC-FT 23770
WTR YR 1989 TOTAL 10704.6 MEAN 29.3 MAX 177 MIN 6.5 AC-FT 21230

09036000 WILLIAMS FORK NEAR LEAL, CO

LOCATION.--Lat 39°50'02", long 106°03'21", in sec.31, T.2 S., R.77 W., Grand County, Hydrologic Unit 14010001, on right bank at downstream side of bridge, 100 ft downstream from Kinney Creek, and 1.7 mi northwest of Leal.

DRAINAGE AREA.--89.5 mi².

PERIOD OF RECORD.--July 1933 to current year. Records since May 10, 1940, equivalent to earlier records if diversion to August P. Gumlick Tunnel is added to flow past station. Prior to October 1958, published as Williams River near Leal.

REVISED RECORDS.--WSP 1733: 1951. WSP 2124: Drainage area. WRD Colo. 1973: 1972.

GAGE.--Water-stage recorder. Elevation of gage is 8,790 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Aug. 16, 1953, at site 15 ft downstream at present datum.

REMARKS.--Estimated Daily discharges: Dec. 27, Jan. 12-13, 20, 22, 26, 27, Feb. 5-7, 16, and Mar. 4-5. Records good except for estimated daily discharges, which are fair. Transmountain diversion upstream from station through August P. Gumlick Tunnel (see table below for figures of diversion). Diversions for irrigation of about 200 acres of hay meadows upstream from station and about 40 acres downstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

COOPERATION.--Diversions, in acre-feet, through August P. Gumlick Tunnel, provided by Colorado Division of Water Resources.

AVERAGE DISCHARGE.--56 years, 104 ft³/s; 75,350 acre-ft/yr, including diversions to August P. Gumlick Tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,720 ft³/s, June 10, 1952, gage height, 4.23 ft; maximum gage height, 5.46 ft, June 29, 1971 (backwater from log); minimum daily discharge, 13 ft³/s, at times in 1939, 1963, 1964, and 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 462 ft³/s at 2100 June 19, gage height, 2.79 ft; minimum daily, 15 ft³/s, many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	26	18	15	15	15	25	49	295	217	101	37
2	33	27	18	16	15	15	20	53	280	209	131	37
3	32	29	18	16	16	15	18	52	264	191	105	37
4	32	28	18	15	16	15	18	50	240	133	95	36
5	34	28	18	15	16	15	20	49	243	131	89	37
6	32	25	17	16	16	15	21	58	247	164	83	37
7	27	27	17	16	16	15	24	74	244	169	81	36
8	26	26	18	16	17	16	27	101	252	162	75	36
9	27	26	17	16	16	16	25	128	242	153	72	36
10	31	24	17	16	15	17	22	143	236	146	80	35
11	32	26	17	16	15	17	23	159	245	161	76	36
12	30	23	17	16	15	18	22	153	288	201	88	39
13	29	26	17	16	16	18	23	131	248	174	86	45
14	28	26	17	16	16	18	25	116	237	149	73	43
15	25	24	17	16	15	17	29	105	248	139	66	41
16	24	20	17	16	15	18	34	100	284	125	62	39
17	23	22	16	15	15	17	37	94	313	116	64	38
18	23	25	16	15	15	16	46	104	286	107	63	35
19	24	24	16	15	15	17	51	138	345	102	60	34
20	25	21	16	15	15	16	62	165	299	96	64	35
21	25	22	16	15	15	15	79	187	289	93	56	33
22	24	22	16	15	15	17	88	204	324	93	53	31
23	24	23	16	15	15	17	89	241	292	104	51	28
24	24	23	16	15	15	17	98	265	270	111	49	25
25	24	22	16	15	15	20	98	249	262	105	47	25
26	25	22	16	15	16	21	91	209	237	101	45	25
27	25	21	16	15	15	22	101	216	172	93	44	25
28	24	20	17	15	15	22	71	254	165	103	43	26
29	26	21	16	15	---	25	60	303	162	131	41	25
30	28	20	16	15	---	20	54	347	172	140	39	25
31	27	---	16	15	---	20	---	310	---	110	38	---
TOTAL	847	719	519	478	431	542	1401	4807	7681	4229	2120	1017
MEAN	27.3	24.0	16.7	15.4	15.4	17.5	46.7	155	256	136	68.4	33.9
MAX	34	29	18	16	17	25	101	347	345	217	131	45
MIN	23	20	16	15	15	15	18	49	162	93	38	25
AC-FT	1680	1430	1030	948	855	1080	2780	9530	15240	8390	4210	2020
a	192	206	160	104	119	113	344	2730	4690	307	0	85

CAL YR 1988 TOTAL 33741 MEAN 92.2 MAX 818 MIN 16 AC-FT 66930
WTR YR 1989 TOTAL 24791 MEAN 67.9 MAX 347 MIN 15 AC- 49170

a-Diversions, in acre-feet, through August P. Gumlick Tunnel, provided by Coloarado Division of Water Resources.

09037500 WILLIAMS FORK NEAR PARSHALL, CO

LOCATION.--Lat 40°00'01", long 106°10'45", in SW¼SW¼ sec.31, T.1 N., R.78 W., Grand County, Hydrologic Unit 14010001, on left bank 150 ft downstream from bridge on State Highway 286, 3.7 mi downstream from Skylark Creek, 3.9 mi south of Parshall, and 4.2 mi upstream from Williams Fork Reservoir Dam.

DRAINAGE AREA.--184 mi².

PERIOD OF RECORD.--July 1904 to September 1924, June 1933 to current year. Records since May 10, 1940, equivalent to earlier records if diversion to August P. Gumlick Tunnel is added to flow past station. Published as "near (Hot) Sulphur Springs" 1904-12 and as Williams River near Parshall June 1933 to September 1958. Water-quality data available, April 1986 to September 1987.

REVISED RECORDS.--WSP 1243: 1918. WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,808.95 ft, (Denver Board of Water Commissioners Datum). See WSP 1733 for history of changes prior to Aug. 9, 1938. Aug. 10, 1938 to Aug. 19, 1983 gage located on right bank at present datum.

REMARKS.--Estimated daily discharges: Nov. 3-15, and Nov. 17 to Mar. 29. Records good except for estimated daily discharges, which are poor. Transmountain diversion upstream from station through August P. Gumlick Tunnel (station 09036000). Diversions upstream from station for irrigation of about 1,300 acres upstream from station, and about 2,500 acres downstream from station. About 150 acres upstream from station irrigated by diversions into the drainage area.

AVERAGE DISCHARGE.--76 years, 136 ft³/s; 98,530 acre-ft/yr, including diversion to August P. Gumlick Tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 2,620 ft³/s, June 14, 1918, gage height, 6.05 ft, site and datum then in use, from rating curve extended above 1,400 ft³/s; minimum daily, 4.8 ft³/s, May 6, 8-10, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 450 ft³/s at 0230 June 19, gage height, 2.54 ft; minimum daily, 11 ft³/s, Sept. 4-7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	31	36	36	38	41	53	87	224	126	52	16
2	37	33	36	36	38	41	45	91	209	212	91	14
3	34	33	36	36	38	41	43	93	188	88	65	13
4	30	33	36	36	38	41	41	95	163	43	48	11
5	33	32	36	36	38	41	43	95	142	24	43	11
6	35	30	36	36	38	42	47	112	155	29	39	11
7	34	33	36	36	38	42	57	135	147	27	35	11
8	34	33	36	36	38	42	64	168	152	26	25	12
9	34	33	36	36	38	42	60	206	152	25	21	13
10	36	33	36	36	38	42	52	235	142	24	27	13
11	37	33	36	36	38	44	57	237	150	25	24	13
12	37	33	36	36	38	44	52	218	177	64	37	14
13	36	32	36	36	38	44	54	188	161	52	36	41
14	36	30	36	36	38	44	59	174	132	34	34	59
15	34	30	36	36	38	44	69	140	133	31	32	56
16	31	27	36	37	39	46	83	95	164	29	27	51
17	31	29	36	37	39	46	95	85	353	28	30	50
18	31	31	36	37	39	46	112	89	390	23	36	48
19	31	33	36	37	39	46	116	125	379	21	39	44
20	34	34	36	37	39	46	135	150	228	19	43	45
21	35	35	36	37	39	46	159	177	181	18	36	48
22	35	35	36	37	39	46	171	174	203	18	31	48
23	33	35	36	37	39	47	166	208	174	18	29	43
24	31	35	36	37	39	47	168	237	147	22	25	40
25	31	35	36	37	39	47	166	231	132	21	21	37
26	30	35	36	37	39	50	142	168	116	26	20	36
27	30	35	36	37	39	51	150	163	62	23	19	36
28	29	35	36	37	39	53	123	181	34	28	17	36
29	30	35	36	37	---	56	105	232	31	52	17	35
30	33	35	36	37	---	48	96	293	31	89	17	35
31	33	---	36	37	---	48	---	258	---	60	16	---
TOTAL	1032	986	1116	1132	1077	1404	2783	5140	5042	1325	1032	940
MEAN	33.3	32.9	36.0	36.5	38.5	45.3	92.8	166	168	42.7	33.3	31.3
MAX	37	35	36	37	39	56	171	293	380	212	91	59
MIN	29	27	36	36	38	41	41	85	31	18	16	11
AC-FT	2050	1960	2210	2250	2140	2780	5520	10200	10000	2630	2050	1860

CAL YR 1988 TOTAL 36789 MEAN 101 MAX 840 MIN 10 AC-FT 72970
WTR YR 1989 TOTAL 23009 MEAN 63.0 MAX 380 MIN 11 AC-FT 45640

09038000 WILLIAMS FORK RESERVOIR NEAR PARSHALL, CO

LOCATION.--Lat 40°02'06", long 106°12'17", in SE¼ sec.23, T.1 N., R.79 W., Grand County, Hydrologic Unit 14010001, at dam on Williams Fork, 2.1 mi upstream from mouth, and 2.2 mi southwest of Parshall.

DRAINAGE AREA.--230 mi².

PERIOD OF RECORD.--April 1939 to current year. Prior to October 1948, published in WSP 1313.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Non recording gage read once daily. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city engineer of Denver); gage readings have been reduced to elevations above National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete-arch dam completed in October 1939; storage began April 1939; dam was enlarged Dec. 5, 1956, to Apr. 22, 1959. Enlarged capacity, 96,820 acre-ft, between elevations 7.634 ft, invert of outlet, and 7,811 ft, top of radial gates on spillway. No dead storage. Figures given represent usable contents. Reservoir is used for power development and to store water to compensate for water diverted through August P. Gumlick Tunnel. Water is released during periods of low flow in Colorado River to supply decreed prior water rights. Records provided by Denver Board of Water Commissioners.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 97,130 acre-ft, July 9, 1962, elevation, 7,811.19 ft; no contents at times in 1958 (construction) and 1966 (drained for repairs).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 85,030 acre-ft, July 17, elevation, 7,803.32 ft; minimum, 57,650 acre-ft, Mar. 2, elevation, 7,781.74 ft.

MONTHEND ELEVATION AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	7,794.28	72,640	-
Oct. 31	7,791.09	68,570	-4,070
Nov. 30	7,788.63	65,560	-3,010
Dec. 31	7,785.15	61,470	-4,090
CAL YR 1988			-7,990
Jan. 31	7,782.61	58,610	-2,860
Feb. 28	7,781.81	57,730	-880
Mar. 31	7,783.93	60,080	+2,350
Apr. 30	7,784.48	60,700	+620
May 31	7,792.65	70,540	+9,840
June 30	7,801.28	82,110	+11,570
July 31	7,801.93	83,030	+920
Aug. 31	7,796.46	75,500	-7,530
Sept. 30	7,792.15	69,910	-5,590
WTR YR 1989			-2,730

09038500 WILLIAMS FORK BELOW WILLIAMS FORK RESERVOIR, CO

LOCATION.--Lat 40°02'07", long 106°12'17", in SE¼ sec.23, T.1 N., R.79 W., Grand County, Hydrologic Unit 14010001, on left bank 400 ft downstream from Williams Fork Reservoir, 2.1 mi upstream from mouth, and 2.1 mi southwest of Parshall.

DRAINAGE AREA.--230 mi².

PERIOD OF RECORD.--October 1948 to September 1954, August 1958 to current year. Monthly discharge only for some periods, published in WSP 1313. Prior to October 1958, published as Williams River below Williams Fork Reservoir. Water-quality data available, April 1986 to September 1987.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 7,615.0 ft, (Denver Board of Water Commissioners Datum). See WSP 1713 or 1733 for history of changes prior to Oct. 21, 1959.

REMARKS.--Estimated daily discharges: Oct. 1-27. Records good. Flow completely regulated by Williams Fork Reservoir (station 09038000). Transmountain diversion upstream from station through August P. Gumlick Tunnel (station 09036000). Diversions upstream from station for irrigation of about 3,200 acres upstream from station and about 100 acres downstream from station. About 450 acres upstream from station irrigated by diversion into the drainage area.

AVERAGE DISCHARGE.--37 years, 128 ft³/s; 92,740 acre-ft/yr, adjusted for storage in Williams Fork Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,640 ft³/s, June 20, 1953, gage height, 8.50 ft, site and datum then in use, from rating curve extended above 1,500 ft³/s; no flow for part of Apr. 29, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 523 ft³/s at 1200 July 21, gage height, 3.12 ft; minimum daily, 7.7 ft³/s, Mar. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	15	119	116	61	64	15	111	29	24	23	116
2	106	15	115	116	62	65	15	115	29	24	23	116
3	106	43	115	117	62	45	55	53	28	24	23	117
4	106	118	117	115	62	25	119	13	28	24	23	118
5	106	118	118	115	62	25	118	15	28	24	73	120
6	106	115	112	115	60	25	116	16	28	23	143	120
7	106	115	116	115	62	19	117	16	28	22	164	119
8	106	116	116	115	62	11	119	16	28	22	211	118
9	106	106	116	116	62	12	120	16	28	22	238	118
10	106	82	116	116	62	12	120	16	28	22	236	118
11	106	80	117	116	62	13	120	16	28	37	242	118
12	106	80	118	116	62	13	117	16	28	30	242	118
13	106	80	116	116	62	13	118	16	28	23	242	118
14	106	80	115	116	62	13	120	16	28	23	238	119
15	106	90	116	118	62	13	120	16	28	23	238	119
16	108	113	117	118	62	13	116	16	25	23	244	120
17	108	115	118	118	62	13	111	16	23	23	243	119
18	106	115	117	118	62	12	116	16	23	143	246	118
19	108	115	116	118	62	11	114	16	26	277	238	139
20	108	115	116	83	62	11	114	16	26	259	245	184
21	152	115	116	62	62	11	113	16	24	235	240	186
22	106	116	116	62	62	10	110	16	23	246	231	190
23	108	116	116	63	62	7.7	115	25	23	244	231	189
24	108	116	116	62	62	9.6	114	28	23	245	221	193
25	106	115	116	62	63	12	110	28	23	188	221	188
26	108	115	116	63	64	12	113	28	23	143	221	189
27	111	115	116	63	64	12	116	28	23	85	221	190
28	93	117	115	63	64	12	115	28	23	22	186	189
29	86	118	116	62	---	12	119	28	23	23	120	166
30	86	107	116	61	---	12	116	29	24	23	116	118
31	42	---	116	60	---	14	---	29	---	23	115	---
TOTAL	3236	2976	3601	2976	1740	552.3	3221	830	777	2569	5698	4242
MEAN	104	99.2	116	96.0	62.1	17.8	107	26.8	25.9	82.9	184	141
MAX	152	118	119	118	64	65	120	115	29	277	246	193
MIN	42	15	112	60	60	7.7	15	13	23	22	23	116
AC-FT	6420	5900	7140	5900	3450	1100	6390	1650	1540	5100	11300	8410

CAL YR 1988 TOTAL 48716 MEAN 133 MAX 557 MIN 15 AC-FT 96630
WTR YR 1989 TOTAL 32418.3 MEAN 88.8 MAX 277 MIN 7.7 AC-FT 64300

09039000 TROUBLESOME CREEK NEAR PEARMONT, CO

LOCATION.--Lat 40°13'03", long 106°18'45", in SE¼ sec.14, T.3 N., R.80 W., Grand County, Hydrologic Unit 14010001, on left bank 45 ft downstream from small tributary, 3 mi north of Pearmont, 4 mi downstream from Rabbit Ear Creek, 5.2 mi upstream from East Fork, and 12 mi northeast of Kremmling.

DRAINAGE AREA.--44.6 mi².

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,049 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 17-23, and Nov. 25 to Apr. 5. Records good except for estimated daily discharges, which are poor. One diversion upstream from station for irrigation of about 250 acres downstream from station. Flow partly regulated during irrigation season by one reservoir, capacity, 1,970 acre-ft, upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--36 years, 30.5 ft³/s; 22,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 630 ft³/s, June 25, 1983, gage height, 2.81 ft; maximum gage height, 3.93 ft, Mar. 31, 1965 (backwater from ice); minimum daily discharge, 4.5 ft³/s, Dec. 20-24, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 100 ft³/s at 2200 May 21, gage height, 1.44 ft; minimum daily, 8.8 ft³/s, Mar. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	13	13	12	11	10	9.0	25	57	30	15	11
2	13	13	13	12	11	10	9.0	25	53	28	22	11
3	13	15	13	12	11	10	9.0	26	50	27	21	11
4	13	14	13	12	11	10	9.0	25	49	26	20	11
5	13	14	13	12	11	10	10	25	45	26	19	11
6	14	13	13	12	11	9.0	11	27	41	25	16	11
7	14	14	13	12	11	9.0	13	31	38	24	16	11
8	13	14	13	12	11	9.0	14	37	37	22	16	12
9	13	14	13	12	11	9.0	14	45	36	20	18	12
10	14	14	13	12	11	9.0	13	54	36	19	18	12
11	14	14	13	12	11	9.0	13	69	34	19	18	12
12	13	13	13	12	11	9.0	12	77	33	19	17	13
13	13	14	13	12	11	9.0	14	73	32	18	17	13
14	13	14	13	12	11	9.0	15	69	32	14	16	13
15	13	13	13	12	11	9.0	16	64	31	15	15	12
16	13	14	13	12	11	9.0	19	61	31	15	14	12
17	13	14	13	12	11	9.0	20	57	35	15	13	12
18	13	14	13	12	11	9.0	23	56	39	14	14	12
19	14	14	13	12	11	9.0	26	57	41	14	14	13
20	14	14	13	12	11	9.0	28	63	46	14	15	13
21	13	14	13	12	11	9.0	33	69	44	13	15	13
22	13	14	13	12	11	8.8	35	72	40	13	14	12
23	13	14	13	12	11	9.0	34	72	39	14	13	12
24	13	14	13	12	11	9.0	36	75	37	18	12	12
25	13	13	13	12	11	9.0	37	74	36	18	12	11
26	13	13	13	12	10	9.0	37	69	32	19	12	11
27	13	13	13	12	10	9.0	35	66	30	19	12	11
28	13	13	13	12	10	9.0	30	62	28	20	12	11
29	13	13	13	12	---	9.7	29	60	27	25	12	11
30	13	13	13	12	---	9.0	27	61	28	23	12	11
31	13	---	13	12	---	9.7	---	60	---	19	11	---
TOTAL	409	410	403	372	305	283.8	630.0	1708	1137	605	471	353
MEAN	13.2	13.7	13.0	12.0	10.9	9.15	21.0	55.1	37.9	19.5	15.2	11.8
MAX	14	15	13	12	11	10	37	77	57	30	22	13
MIN	13	13	13	12	10	8.8	9.0	25	27	13	11	11
AC-FT	811	813	799	738	605	563	1250	3390	2260	1200	934	700

CAL YR 1988 TOTAL 11143 MEAN 30.4 MAX [illegible] MIN 12 AC-FT 22100
WTR YR 1989 TOTAL 7086.8 MEAN 19.4 MAX 77 MIN 8.8 AC-FT 14060

09041500 MUDDY CREEK AT KREMMLING, CO

LOCATION.--Lat 40°03'43", long 106°23'43", in NW¼SE¼ sec. 7, T.1 N., R.80 W., Grand County, Hydrologic Unit 14010001, on left bank 900 ft upstream from U.S. Highway 40 bridge at Kremmling and 3.0 mi upstream from mouth.

DRAINAGE AREA.--290 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August to October 1904, April to October 1905. Monthly discharge only in WSP 1313. April 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,340 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Aug. 23, 1989, at site 450 ft downstream at same datum. Supplementary recorder on diversion ditch about 2,000 ft downstream from point of diversion.

REMARKS.--Estimated daily discharges: Oct. 3, Nov. 18-20, Nov. 22-24, Dec. 11 to Mar. 10, June 5-20, and Aug. 7-23. Records good except for estimated daily discharges, which are poor. Records include flow of diversion ditch.

AVERAGE DISCHARGE.--7 years, 116 ft³/s; 84,040 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum combined discharge, 1,670 ft³/s, May 16, 1984, gage height, 12.67 ft; minimum daily, 1.0 ft³/s, Sept. 24, 25, 1905.

EXTREMES FOR CURRENT YEAR.--Maximum combined discharge, 548 ft³/s at 1000 Apr. 25, gage height, 6.69 ft; minimum daily, 4.4 ft³/s, Oct. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	13	18	18	14	15	81	202	218	66	32	5.7
2	5.0	12	18	18	14	16	63	239	195	64	51	5.6
3	4.7	15	17	18	14	17	62	220	173	62	48	6.2
4	4.4	28	17	18	14	18	47	228	173	59	28	13
5	12	29	16	18	14	19	45	222	144	56	21	5.1
6	20	20	15	18	14	23	54	237	142	61	17	6.1
7	23	17	16	17	14	25	88	272	127	53	10	5.7
8	20	18	17	17	14	29	97	318	142	40	9.4	6.6
9	20	21	18	17	14	38	111	415	105	42	9.0	6.8
10	22	22	17	17	14	43	94	441	96	40	8.8	9.0
11	23	19	17	17	14	50	96	441	87	33	8.4	9.7
12	21	19	17	17	14	54	82	423	75	31	8.2	12
13	15	24	17	17	14	53	84	359	62	53	8.2	14
14	9.8	25	17	17	14	85	107	318	54	74	7.8	13
15	7.6	29	17	16	15	86	131	304	49	60	6.3	12
16	8.4	19	17	16	15	100	142	259	49	56	6.2	10
17	8.3	15	17	16	15	116	138	247	54	52	5.8	8.1
18	8.2	15	17	16	15	106	234	258	70	40	5.6	7.2
19	8.5	15	17	16	15	122	287	312	90	24	5.6	6.7
20	10	16	17	16	15	125	267	322	93	20	19	6.7
21	12	16	18	16	15	97	332	327	63	18	19	8.0
22	14	16	18	16	15	109	393	311	57	13	18	5.9
23	15	16	18	16	15	143	397	342	60	10	17	7.3
24	14	15	18	15	15	160	457	349	80	16	12	7.1
25	13	15	18	15	15	208	484	349	56	29	11	6.8
26	12	18	18	15	15	212	462	310	62	38	11	7.0
27	12	21	18	15	15	137	457	266	60	44	10	7.1
28	11	18	18	15	15	115	328	264	64	29	9.1	8.5
29	11	19	18	15	---	136	259	259	58	83	9.4	7.5
30	11	19	18	15	---	99	224	263	56	54	7.8	6.9
31	15	---	18	15	---	68	---	246	---	43	6.8	---
TOTAL	395.5	562	537	508	406	2615	6146	9260	2859	1368	445.9	241.2
MEAN	12.8	18.7	17.3	16.4	14.5	84.4	205	299	95.3	44.1	14.4	8.04
MAX	23	29	18	18	15	212	484	441	218	83	51	14
MIN	4.4	12	15	15	14	15	45	202	49	10	5.6	5.1
AC-FT	784	1110	1070	1010	805	5190	12190	18370	5670	2710	884	478

CAL YR 1988 TOTAL 34772.1 MEAN 95.0 MAX 812 MIN 4.4 AC-FT 68970
WTR YR 1989 TOTAL 25343.6 MEAN 69.4 MAX 484 MIN 4.4 AC-FT 50270

09041500 MUDDY CREEK AT KREMMLING, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1985 to curent year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1986 to September 1987 (discontinued).
WATER TEMPERATURE: April 1986 to September 1987 (discontinued).

INSTRUMENTATION.--Water-quality monitor from April 1986 to September 1987.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum mean, 1,610 microsiemens, July 29, 1987; minimum mean, 212 microsiemens, May 22, 1986.
WATER TEMPERATURE: Maximum, 24.8°C, July 26, 1987; minimum, 0.0°C, on many days during winter.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT										
27...	1100	11	1090	8.6	5.0	15	9.4	470	100	54
DEC										
20...	1230	18	700	8.4	0.0	9.0	9.0	330	81	31
FEB										
01...	1145	15	632	7.8	0.0	9.5	--	260	66	24
MAR										
01...	1215	15	724	--	3.0	9.6	9.2	270	66	25
28...	1110	131	946	7.9	1.0	100	10.4	380	79	44
APR										
25...	1400	530	275	7.4	11.5	430	9.6	110	29	8.0
MAY										
25...	1130	303	324	8.6	10.5	78	8.6	150	40	11
JUN										
20...	1115	16	1060	8.5	18.0	6.9	7.2	520	140	42
JUL										
18...	1300	35	1080	8.3	21.5	1.0	8.5	440	110	40
AUG										
31...	1410	3.98	1120	8.3	19.5	9.8	--	470	110	48
SEP										
20...	1600	6.6	1310	8.3	16.0	26	7.6	620	140	66

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
OCT										
27...	55	20	1	2.9	177	430	5.2	0.20	5.6	784
DEC										
20...	37	19	0.9	2.4	171	220	3.8	0.20	10	494
FEB										
01...	31	20	0.9	2.0	156	180	3.7	0.20	12	415
MAR										
01...	35	22	1	1.8	154	230	5.1	0.20	10	484
28...	63	26	1	--	133	380	7.7	0.20	8.2	712
APR										
25...	8.8	15	0.4	1.7	78	47	1.4	0.10	7.9	162
MAY										
25...	18	21	0.7	1.5	71	88	1.3	0.10	9.5	223
JUN										
20...	33	12	0.7	2.8	190	410	2.8	0.30	11	782
JUL										
18...	35	15	0.8	2.3	198	420	3.3	0.30	7.2	797
AUG										
31...	51	19	1	3.4	153	420	4.0	0.30	4.5	728
SEP										
20...	72	20	1	3.5	182	580	5.9	0.30	4.7	1020

09041500 MUDDY CREEK AT KREMMLING, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
OCT										
27...	759	1.07	0.0	--	--	<0.10	--	0.02	--	0.58
DEC										
20...	488	0.67	0.0	--	--	0.20	--	0.02	--	0.28
FEB										
01...	412	0.56	16.5	--	--	0.20	--	0.04	--	0.56
MAR										
01...	465	0.66	20.1	--	--	0.20	--	0.06	--	0.24
28...	667	0.97	252	229	--	0.20	--	0.20	--	1.0
APR										
25...	151	0.22	232	--	--	0.40	--	0.08	--	1.4
MAY										
25...	213	0.30	0.0	--	--	<0.10	--	0.03	--	0.27
JUN										
20...	757	1.06	32.9	13	<0.01	<0.10	<0.10	0.03	0.03	0.77
JUL										
18...	737	1.08	0.0	--	--	<0.10	--	0.03	--	3.0
AUG										
31...	733	0.99	1.93	--	--	<0.10	--	0.04	--	0.36
SEP										
20...	983	1.39	0.0	--	<0.01	<0.10	<0.10	0.04	0.03	0.46

DATE	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
OCT										
27...	--	0.60	--	--	0.02	--	<0.01	--	--	--
DEC										
20...	--	0.30	--	0.50	0.02	--	<0.01	--	--	--
FEB										
01...	--	0.60	--	0.80	0.03	--	0.04	--	--	--
MAR										
01...	--	0.30	--	0.50	0.03	--	0.01	--	--	--
28...	--	1.2	--	1.4	0.28	--	0.06	--	8.7	6.9
APR										
25...	--	1.5	--	1.9	0.22	--	0.09	--	--	--
MAY										
25...	--	0.30	--	--	0.12	--	0.04	--	--	--
JUN										
20...	0.67	0.80	0.70	--	0.03	0.02	0.03	<0.01	10	9.2
JUL										
18...	--	3.0	--	--	0.03	--	<0.01	--	--	--
AUG										
31...	--	0.40	--	--	0.03	--	<0.01	--	--	--
SEP										
20...	0.47	0.50	0.50	--	0.04	<0.01	<0.01	<0.01	6.9	5.7

DATE	TIME	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)
OCT												
27...	1100	--	--	--	--	--	--	--	--	--	--	--
DEC												
20...	1230	--	--	--	--	--	--	--	--	--	--	--
FEB												
01...	1145	--	--	--	--	--	--	--	--	--	--	--
MAR												
01...	1215	--	--	--	--	--	--	--	--	--	--	--
28...	1110	--	--	--	--	--	--	--	--	--	--	--
APR												
25...	1400	--	--	--	--	--	--	--	--	--	--	--
MAY												
25...	1130	--	--	<1	--	39	--	--	--	<1	--	[illegible]
JUN												
20...	1115	270	1	1	100	100	<10	110	<1	<1	<1	[illegible]
JUL												
18...	1300	--	--	--	--	--	--	--	--	--	--	--
AUG												
31...	1410	--	--	--	--	--	--	--	--	--	--	--
SEP												
20...	1600	880	1	--	<100	86	<10	160	<1	<1	<1	[illegible]

09041500 MUDDY CREEK AT KREMMLING, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)
OCT												
27...	--	--	--	--	17	--	--	--	--	--	--	--
DEC												
20...	--	--	--	--	19	--	--	--	--	--	--	--
FEB												
01...	--	--	--	--	35	--	--	--	--	--	--	--
MAR												
01...	--	--	--	--	30	--	--	--	--	--	--	--
28...	--	--	--	--	72	--	--	--	--	--	--	--
APR												
25...	--	--	--	--	32	--	--	--	--	--	--	--
MAY												
25...	--	--	4	--	190	--	--	1	--	10	<0.1	--
JUN												
20...	1	--	6	560	40	60	2	<1	50	20	<0.1	<0.10
JUL												
18...	--	--	--	--	18	--	--	--	--	--	--	--
AUG												
31...	--	--	--	--	9	--	--	--	--	--	--	--
SEP												
20...	1	4	2	1100	5	30	2	<1	110	82	<0.1	<0.10

DATE	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT											
27...	--	--	--	--	--	--	--	--	--	--	--
DEC											
20...	--	--	--	--	--	--	--	--	--	--	--
FEB											
01...	--	--	--	--	--	--	--	--	--	--	--
MAR											
01...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
APR											
25...	--	--	--	--	--	--	--	--	--	--	--
MAY											
25...	--	--	--	--	--	2	--	<1.0	350	--	12
JUN											
20...	2	2	4	2	4	4	<1	<1.0	1300	<10	<10
JUL											
18...	--	--	--	--	--	--	--	--	--	--	--
AUG											
31...	--	--	--	--	--	--	--	--	--	--	--
SEP											
20...	3	3	6	3	2	2	<1	<1.0	1400	10	6

09041500 MUDDY CREEK AT KREMMLING, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
27...	1100	11	61	1.9	92
DEC					
20...	1230	18	--	--	--
FEB					
01...	1145	15	--	--	--
MAR					
01...	1215	15	21	0.87	78
28...	1110	131	--	--	--
APR					
17...	1200	212	1080	618	95
25...	1400	530	894	1280	77
27...	1100	484	1630	2130	73
MAY					
02...	1200	212	190	109	83
10...	1330	431	679	790	78
12...	1245	409	424	468	79
18...	1200	241	136	88	91
25...	1130	303	285	233	86
JUN					
20...	1115	16	--	--	--
JUL					
13...	1300	35	74	7.1	91
AUG					
31...	1410	0.93	46	0.12	57
SEP					
20...	1600	6.5	--	--	--

09041900 MONTE CRISTO DIVERSION NEAR HOOSIER PASS, CO

LOCATION.--Lat 39°22'51", long 106°04'15", in NE¼SE¼ sec.2, T.8 S., R.78W., Summit County, Hydrologic Unit 14010002, on left bank at entrance to Hoosier Pass tunnel, 1,300 ft downstream from diversion point, 1.4 mi northwest of Hoosier Pass, and 7 mi southwest of Breckenridge.

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 10,986 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. This is a transmountain diversion from Monte Cristo Creek in Blue River basin through Hoosier Pass tunnel to South Platte River basin from which it is again diverted to South Catamount Creek in the Arkansas River basin. Water is for municipal use by city of Colorado Springs. Diversion point is in SW¼NE¼ sec.2, T.8 S., R.78 W. The entire flow is regulated by diversion gates.

COOPERATION.--Gage-height record collected in cooperation with city of Colorado Springs.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 72 ft³/s, July 25, 1989; no flow for most of each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	.00	.00	.00	.00	.00	.00	2.3	6.7	3.1	4.0	.00
2	22	.00	.00	.00	.00	.00	.00	2.3	6.1	3.0	2.3	.00
3	19	.00	.00	.00	.00	.00	.00	2.2	5.1	2.8	1.8	.00
4	6.3	.00	.00	.00	.00	.00	.00	2.1	3.9	2.8	1.5	.00
5	.00	.00	.00	.00	.00	.00	.00	2.0	3.4	2.8	1.5	.00
6	.00	.00	.00	.00	.00	.00	.00	2.0	4.3	2.8	1.4	.00
7	.00	.00	.00	.00	.00	.00	.00	4.6	4.3	2.5	9.3	.00
8	.00	.00	.00	.00	.00	.00	.00	7.1	4.7	2.4	36	.00
9	.00	.00	.00	.00	.00	.00	.00	8.8	4.6	4.1	48	.00
10	.00	.00	.00	.00	.00	.00	.00	9.6	4.5	18	47	.00
11	.00	.00	.00	.00	.00	.00	.00	6.5	4.6	21	47	.00
12	.00	.00	.00	.00	.00	.00	.00	4.9	5.3	42	45	.00
13	.00	.00	.00	.00	.00	.00	.00	7.5	5.2	57	43	.00
14	.00	.00	.00	.00	.00	.00	.00	3.9	4.6	21	41	.00
15	.00	.00	.00	.00	.00	.00	.00	2.9	5.3	31	39	.00
16	.00	.00	.00	.00	.00	.00	.00	2.4	6.7	16	37	.00
17	.00	.00	.00	.00	.00	.00	.00	2.4	6.5	14	34	.00
18	.00	.00	.00	.00	.00	.00	.00	4.8	5.4	11	14	.00
19	.00	.00	.00	.00	.00	.00	.00	6.7	5.9	4.4	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	5.3	5.7	14	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	8.5	4.9	39	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	9.0	4.1	69	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	11	4.9	69	.00	.00
24	.00	.00	.00	.00	.00	.00	4.7	11	3.3	69	.00	.00
25	.00	.00	.00	.00	.00	.00	7.3	6.8	3.2	72	.00	.00
26	.00	.00	.00	.00	.00	.00	4.6	4.9	3.1	71	.00	.00
27	.00	.00	.00	.00	.00	.00	3.1	5.9	3.1	66	.00	.00
28	.00	.00	.00	.00	.00	.00	2.4	8.1	3.1	63	.00	.00
29	.00	.00	.00	.00	---	.00	2.3	9.4	3.2	63	.00	.00
30	.00	.00	.00	.00	---	.00	2.3	9.1	3.2	62	.00	.00
31	.00	---	.00	.00	---	.00	---	7.3	---	43	.00	---
TOTAL	72.30	0.00	0.00	0.00	0.00	0.00	26.70	181.1	138.9	961.7	451.30	0.00
MEAN	2.33	.00	.00	.00	.00	.00	.89	5.84	4.63	31.0	14.6	.00
MAX	25	.00	.00	.00	.00	.00	7.3	11	6.7	72	48	.00
MIN	.00	.00	.00	.00	.00	.00	.00	2.0	3.1	2.4	.00	.00
AC-FT	143	.0	.0	.0	.0	.0	53	359	276	1910	896	.0

CAL YR 1988 TOTAL 1671.45 MEAN 4.57 MAX 56 MIN .00 AC-FT 3320
WTR YR 1989 TOTAL 1832.50 MEAN 5.02 MAX 72 MIN .00 AC-FT 3630

09044300 BEMROSE-HOOSIER DIVERSION NEAR HOOSIER PASS, CO

LOCATION.--Lat 39°22'50", long 106°04'13", in NE¼SE¼ sec.2, T.8 S., R.78W., Summit County, Hydrologic Unit 14010002, on right bank at entrance to Hoosier Pass tunnel, 1.4 mi northwest of Hoosier Pass, 1.6 mi downstream from diversion point on Bemrose Creek, and 7 mi southwest of Breckenridge.

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 10,986 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. This is a transmountain diversion from Bemrose and Hoosier Creeks in Blue River basin through Hoosier Pass tunnel to South Platte River basin from which it is again diverted to South Catamount Creek in the Arkansas River basin. Water is for municipal use by city of Colorado Springs. Diversion points are in SW¼SW¼ sec.6, T.8 S., R.77 W., and in sec.12, T.8 S., R.78 W. The entire flow is regulated by diversion gates.

COOPERATION.--Gage-height record collected in cooperation with city of Colorado Springs.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 44 ft³/s, June 21, 1965; no flow for most of each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	2.2	15	9.5	5.6	.00
2	.00	.00	.00	.00	.00	.00	.00	2.2	14	9.3	5.6	.00
3	.00	.00	.00	.00	.00	.00	.00	2.1	13	9.1	5.2	.00
4	.00	.00	.00	.00	.00	.00	.00	2.0	11	8.9	5.0	.00
5	.00	.00	.00	.00	.00	.00	.00	2.0	10	8.6	4.8	.00
6	.00	.00	.00	.00	.00	.00	.00	2.2	12	8.4	4.7	.00
7	.00	.00	.00	.00	.00	.00	.00	3.3	12	7.8	4.0	.00
8	.00	.00	.00	.00	.00	.00	.00	4.3	13	7.4	3.0	.00
9	.00	.00	.00	.00	.00	.00	.00	5.7	12	7.2	2.9	.00
10	.00	.00	.00	.00	.00	.00	.00	5.7	12	6.9	3.2	.00
11	.00	.00	.00	.00	.00	.00	.00	5.4	13	7.9	3.5	.00
12	.00	.00	.00	.00	.00	.00	.00	4.8	14	9.7	3.2	.00
13	.00	.00	.00	.00	.00	.00	.00	4.2	13	8.7	2.9	.00
14	.00	.00	.00	.00	.00	.00	.00	3.7	13	7.2	2.7	.00
15	.00	.00	.00	.00	.00	.00	.00	3.1	15	6.7	2.6	.00
16	.00	.00	.00	.00	.00	.00	.00	3.0	18	5.9	2.5	.00
17	.00	.00	.00	.00	.00	.00	.00	3.0	18	5.3	2.5	.00
18	.00	.00	.00	.00	.00	.00	.00	4.5	17	4.9	2.3	.00
19	.00	.00	.00	.00	.00	.00	.00	5.4	18	3.7	2.3	.00
20	.00	.00	.00	.00	.00	.00	.00	6.5	17	3.5	2.2	.00
21	.00	.00	.00	.00	.00	.00	.00	8.0	15	3.3	2.1	.00
22	.00	.00	.00	.00	.00	.00	.00	8.6	14	3.2	2.0	.00
23	.00	.00	.00	.00	.00	.00	.00	11	13	3.7	2.0	.00
24	.00	.00	.00	.00	.00	.00	2.0	13	12	3.8	1.9	.00
25	.00	.00	.00	.00	.00	.00	3.7	9.8	12	4.8	1.9	.00
26	.00	.00	.00	.00	.00	.00	3.3	8.9	11	4.1	1.7	.00
27	.00	.00	.00	.00	.00	.00	2.6	9.5	11	3.7	1.6	.00
28	.00	.00	.00	.00	.00	.00	2.2	12	10	3.7	1.6	.00
29	.00	.00	.00	.00	---	.00	2.2	15	10	4.0	1.1	.00
30	.00	.00	.00	.00	---	.00	2.2	17	9.7	4.1	.00	.00
31	.00	---	.00	.00	---	.00	---	15	---	4.8	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	18.20	203.1	397.7	189.8	86.60	0.00
MEAN	.00	.00	.00	.00	.00	.00	.61	6.55	13.3	6.12	2.79	.00
MAX	.00	.00	.00	.00	.00	.00	3.7	17	18	9.7	5.6	.00
MIN	.00	.00	.00	.00	.00	.00	.00	2.0	9.7	3.2	.00	.00
AC-FT	.0	.0	.0	.0	.0	.0	36	403	789	376	172	.0

CAL YR 1988 TOTAL 880.18 MEAN 2.40 MAX 23 MIN .00 AC-FT 1750
WTR YR 1989 TOTAL 895.40 MEAN 2.45 MAX 18 MIN .00 AC-FT 1780

09044800 MCCULLOUGH-SPRUCE-CRYSTAL DIVERSION NEAR HOOSIER PASS, CO

LOCATION.--Lat 39°22'51", long 106°04'14", in NE¼SE¼ sec.2, T.8 S., R.78 W., Summit County, Hydrologic Unit 14010002, on left bank at entrance to Hoosier Pass tunnel, 1.4 mi northwest of Hoosier Pass, 1.6 mi downstream from diversion point on McCullough Gulch, and 7 mi southwest of Breckenridge.

PERIOD OF RECORD.--October 1957 to current year. Prior to October 1961, Published as McCullough diversion near Hoosier Pass.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 10,986 ft, above National Geodetic Vertical datum of 1929, from topographic map.

REMARKS.--Estimated daily discharge: July 31. Records good. This is a transmountain diversion from McCullough Gulch and Spruce and Crystal Creeks in Blue River basin through Hoosier Pass tunnel to South Platte River basin from which it is again diverted to South Catamount Creek in the Arkansas River basin. Water is for municipal use by city of Colorado Springs. Diversion points are in secs.14, 23, and 26, T.7 S., R.78 W. The entire flow is regulated by diversion gates.

COOPERATION.--Gage-height record collected in cooperation with city of Colorado Springs.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 123 ft³/s, June 20, 1968, June 19, 1983; no flow for most of each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	54	55	14	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	51	52	43	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	47	52	31	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	40	54	24	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	33	58	20	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	31	55	18	.00
7	.00	.00	.00	.00	.00	.00	.00	.30	31	48	10	.00
8	.00	.00	.00	.00	.00	.00	.00	8.5	30	42	.72	.00
9	.00	.00	.00	.00	.00	.00	.00	12	29	40	.67	.00
10	.00	.00	.00	.00	.00	.00	.00	15	28	41	.61	.00
11	.00	.00	.00	.00	.00	.00	.00	12	28	48	.61	.00
12	.00	.00	.00	.00	.00	.00	.00	8.8	30	97	.62	.00
13	.00	.00	.00	.00	.00	.00	.00	7.2	30	96	.61	.00
14	.00	.00	.00	.00	.00	.00	.00	7.2	30	55	.61	.00
15	.00	.00	.00	.00	.00	.00	.00	5.5	31	42	.61	.00
16	.00	.00	.00	.00	.00	.00	.00	5.0	52	35	.61	.00
17	.00	.00	.00	.00	.00	.00	.00	4.9	71	32	.61	.00
18	.00	.00	.00	.00	.00	.00	.00	5.3	63	27	.61	.00
19	.00	.00	.00	.00	.00	.00	.00	10	77	1.6	.45	.00
20	.00	.00	.00	.00	.00	.00	.00	14	77	.83	.40	.00
21	.00	.00	.00	.00	.00	.00	.00	20	58	.83	.35	.00
22	.00	.00	.00	.00	.00	.00	.00	27	32	.83	.35	.00
23	.00	.00	.00	.00	.00	.00	.00	37	26	.83	.35	.00
24	.00	.00	.00	.00	.00	.00	.00	44	29	.83	.35	.00
25	.00	.00	.00	.00	.00	.00	.00	43	38	.83	.30	.00
26	.00	.00	.00	.00	.00	.00	.00	40	43	.83	.30	.00
27	.00	.00	.00	.00	.00	.00	.00	38	48	.83	.30	.00
28	.00	.00	.00	.00	.00	.00	.00	40	52	.83	.13	.00
29	.00	.00	.00	.00	---	.00	.00	52	55	.83	.00	.00
30	.00	.00	.00	.00	---	.00	.00	58	54	.83	.00	.00
31	.00	---	.00	.00	---	.00	---	59	---	7.0	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	573.70	1298	946.73	170.17	0.00
MEAN	.00	.00	.00	.00	.00	.00	.00	18.5	43.3	30.5	5.49	.00
MAX	.00	.00	.00	.00	.00	.00	.00	59	77	97	43	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	26	.83	.00	.00
AC-FT	.0	.0	.0	.0	.0	.0	.0	1140	2570	1880	338	.0

CAL YR 1988 TOTAL 2848.93 MEAN 7.78 MAX 105 MIN .00 AC-FT 5650
WTR YR 1989 TOTAL 2988.60 MEAN 8.19 MAX 97 MIN .00 AC-FT 5930

09046490 BLUE RIVER AT BLUE RIVER, CO

LOCATION.--Lat 39°27'21", long 106°01'52", in NE¼SE¼ sec.7, T.7 S, R.77 W., Summit County, Hydrologic Unit 14010002 on left bank, 350 ft downstream from spillway of Goose Pasture Tarn Dam, 2.0 mi southeast of Breckenridge.

DRAINAGE AREA.--22.6 mi^2.

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,385 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Jan. 24 to Feb. 8, and Mar. 21-27. Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station by Boreas Pass ditch and Hoosier Pass tunnel. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--6 years, 37.1 ft^3/s; 26,880 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 506 ft^3/s July 1, 1984, gage height, 2.84 ft; minimum daily, 4.5 ft^3/s, Mar. 23, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 116 ft^3/s, at 0400 May 30, gage height, 1.78 ft; minimum daily, 5.4 ft^3/s, Mar. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	12	11	7.0	5.6	5.8	7.0	23	104	43	37	22
2	19	12	10	7.1	5.6	5.8	6.7	25	103	41	34	21
3	19	12	10	7.2	5.6	6.7	8.5	25	97	40	30	20
4	20	13	10	7.2	5.6	6.5	7.6	24	88	38	27	19
5	32	12	9.9	7.4	5.6	5.8	7.0	22	82	36	25	19
6	33	11	9.8	7.2	5.8	5.5	6.7	25	78	34	24	18
7	29	12	10	7.1	6.2	5.4	7.2	31	75	34	24	19
8	24	13	9.4	6.9	6.4	5.7	8.2	42	74	32	35	20
9	20	14	9.4	7.5	6.4	5.8	9.8	53	75	32	41	20
10	18	13	9.4	7.3	6.3	5.7	9.3	70	73	29	44	20
11	17	13	9.3	7.4	6.1	5.7	9.5	68	73	30	50	20
12	16	13	9.1	7.0	6.1	5.8	9.2	64	77	38	64	21
13	15	12	9.3	7.0	6.3	5.8	9.1	60	78	41	57	24
14	15	12	9.4	6.8	6.1	6.0	9.5	59	75	33	49	23
15	14	13	9.3	6.7	6.2	5.9	11	49	72	31	44	22
16	14	12	9.1	6.6	6.2	5.6	12	45	75	28	41	20
17	14	11	8.9	6.6	6.2	5.7	14	42	84	28	41	19
18	14	12	8.7	6.4	5.9	5.7	18	42	78	26	46	19
19	14	11	8.8	6.4	6.0	5.8	23	51	78	47	64	19
20	14	11	8.6	6.3	6.5	5.8	32	58	78	60	64	21
21	14	11	8.3	6.3	6.1	5.8	45	69	75	61	59	22
22	13	10	8.5	6.1	5.9	5.8	59	77	72	61	54	20
23	13	11	8.4	6.2	5.9	5.8	56	90	69	64	49	19
24	13	11	8.4	6.2	5.8	5.8	61	101	63	76	43	19
25	13	11	8.3	6.2	5.8	5.8	53	101	58	88	38	18
26	13	11	8.7	6.2	6.0	5.8	43	87	55	88	33	17
27	12	10	7.8	6.2	6.0	5.8	36	84	52	74	28	17
28	12	11	7.7	6.2	6.0	5.7	29	89	50	70	25	17
29	12	11	7.6	6.2	---	6.9	26	101	47	73	23	17
30	12	11	7.2	6.2	---	6.5	24	110	46	84	23	17
31	12	---	7.0	6.2	---	5.8	---	108	---	68	23	---
TOTAL	519	352	277.3	207.3	168.2	182.0	657.3	1895	2204	1528	1239	589
MEAN	16.7	11.7	8.95	6.69	6.01	5.87	21.9	61.1	73.5	49.3	40.0	19.6
MAX	33	14	11	7.5	6.5	6.9	61	110	104	88	64	24
MIN	12	10	7.0	6.1	5.6	5.4	6.7	22	46	26	23	17
AC-FT	1030	698	550	411	334	361	1300	3760	4370	3030	2460	1170

CAL YR 1988 TOTAL 10134.2 MEAN 27.7 MAX 117 MIN 5.7 AC-FT 20100
WTR YR 1989 TOTAL 9818.1 MEAN 26.9 MAX 110 MIN 5.4 AC-FT 19470

09046600 BLUE RIVER NEAR DILLON, CO

LOCATION.--Lat 39°32'55", long 106°02'19", in NW¼NE¼ sec.7, T.6 S., R.77 W., Summit County, Hydrologic Unit 14010002, on right bank 0.2 mi downstream from Swan River and 5.5 mi south of Dillon.

DRAINAGE AREA.--119 mi².

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 9,120 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Transmountain diversions upstream from station by Boreas Pass ditch and Hoosier Pass tunnel (see elsewhere in this report). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--32 years, 105 ft³/s; 76,070 acre-ft/yr, adjusted for diversions to Hoosier Pass tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,250 ft³/s, June 17, 1965, gage height, 5.38 ft, from rating curve extended above 800 ft³/s; minimum daily, 17 ft³/s, Mar. 21, 1961, Feb. 24-26, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 359 ft³/s at 0300 May 31, gage height, 3.89 ft; minimum daily, 21 ft³/s, Mar. 4-9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	46	39	31	30	23	27	87	343	173	140	63
2	54	46	38	31	30	22	27	86	335	167	121	62
3	54	46	38	30	31	22	26	91	323	158	113	62
4	54	46	38	30	30	21	26	94	309	152	103	61
5	54	46	39	29	30	21	25	95	295	147	96	60
6	56	46	39	28	30	21	25	94	286	145	91	60
7	64	45	39	28	30	21	27	100	277	140	86	59
8	66	45	40	28	30	21	31	119	275	132	83	57
9	62	46	41	28	30	21	34	156	285	127	83	58
10	59	46	38	28	30	22	33	194	271	122	90	58
11	56	46	35	28	30	22	32	232	259	119	98	58
12	55	46	35	28	30	23	31	235	280	136	110	59
13	53	45	34	28	30	24	31	224	278	158	124	60
14	52	44	34	28	30	24	31	216	264	143	117	65
15	52	45	34	28	30	24	34	204	255	125	107	66
16	52	46	34	29	29	23	39	186	266	116	101	65
17	51	45	33	30	29	24	45	178	294	107	95	62
18	50	43	33	30	28	24	54	170	291	102	95	60
19	50	42	34	30	28	26	63	178	290	98	94	59
20	50	42	33	30	30	26	75	201	289	105	105	58
21	50	40	32	30	30	24	89	234	286	118	108	58
22	50	39	31	30	28	24	114	272	270	120	104	60
23	50	39	31	30	28	23	136	311	253	120	98	60
24	49	39	30	30	27	24	145	343	230	125	93	60
25	48	39	30	30	27	25	154	355	212	145	89	59
26	48	39	30	30	25	27	148	330	201	172	84	59
27	47	39	30	30	23	27	135	311	192	157	80	57
28	47	40	30	30	23	27	116	317	187	143	75	55
29	47	41	30	30	---	29	101	334	184	149	71	55
30	46	40	30	30	---	29	93	355	179	167	67	55
31	46	---	31	30	---	28	---	356	---	163	65	---
TOTAL	1626	1297	1063	910	806	742	1947	6658	7959	4251	2986	1790
MEAN	52.5	43.2	34.3	29.4	28.8	23.9	64.9	215	265	137	96.3	59.7
MAX	66	46	41	31	31	29	154	356	343	173	140	66
MIN	46	39	30	28	23	21	25	86	179	98	65	55
AC-FT	3230	2570	2110	1800	1600	1470	3860	13210	15790	8430	5920	3550

CAL YR 1988 TOTAL 32070 MEAN 87.6 MAX 405 MIN 25 AC-FT 63610
WTR YR 1989 TOTAL 32035 MEAN 87.8 MAX 356 MIN 21 AC-FT 63540

09047500 SNAKE RIVER NEAR MONTEZUMA, CO

LOCATION.--Lat 39°36'20", long 105°56'33", in NW¼ sec.19, T.5 S., R.76 W. (projected), Summit County, Hydrologic Unit 14010002, on right bank 200 ft downstream from North Fork and 4.5 mi northwest of Montezuma.

DRAINAGE AREA.--57.7 mi².

PERIOD OF RECORD.--July 1942 to September 1946, October 1951 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 9,320 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 14, 1943, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Nov. 5-11, Nov. 15 to Apr. 25. Records good except for estimated daily discharges, which are poor. Small diversions upstream from station for irrigation and domestic use. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--42 years, 61.5 ft³/s; 44,560 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,250 ft³/s, June 10, 1952, gage height, 3.51 ft; maximum gage height, 3.88 ft, June 6, 1972; minimum daily discharge, 5.0 ft³/s, Feb. 26, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 29	2100	*409	*2.99				

Minimum daily, 10 ft³/s, Feb. 17-24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	25	19	14	11	11	14	41	312	160	111	36
2	30	23	18	14	11	11	14	38	301	154	111	35
3	30	24	18	14	11	11	14	36	279	148	97	34
4	30	21	18	14	11	11	14	34	239	140	89	34
5	34	20	18	14	11	11	14	35	229	138	83	34
6	33	20	18	13	11	11	15	43	231	139	78	34
7	32	20	18	13	11	11	15	55	218	129	73	33
8	32	20	17	13	11	11	16	72	229	122	68	37
9	31	20	17	13	11	11	17	84	221	113	66	37
10	30	20	17	13	11	11	19	98	209	111	66	36
11	29	20	17	13	11	11	18	102	223	114	78	36
12	29	20	17	13	11	11	17	103	252	172	78	40
13	28	18	17	13	11	11	16	99	225	155	74	44
14	28	19	16	13	11	11	16	90	218	125	67	43
15	27	19	16	13	11	12	17	81	234	112	62	43
16	27	19	16	12	11	12	18	78	276	102	60	40
17	27	19	16	12	10	12	19	74	291	95	58	38
18	27	19	16	12	10	12	20	81	268	89	56	37
19	27	19	16	12	10	12	22	106	282	85	55	36
20	28	19	16	12	10	12	26	134	268	81	55	41
21	27	19	16	12	10	12	32	161	253	79	51	39
22	26	19	16	12	10	12	38	177	216	78	49	37
23	25	19	15	12	10	12	47	232	194	93	47	35
24	25	19	15	12	10	13	56	256	179	95	45	34
25	24	19	15	12	11	13	67	246	178	139	44	34
26	24	19	15	12	11	13	66	208	176	145	42	33
27	24	19	15	11	11	13	59	227	164	111	40	33
28	23	19	15	11	11	13	50	277	163	105	39	32
29	23	19	15	11	---	13	44	330	164	128	38	31
30	25	19	14	11	---	13	41	342	162	147	39	30
31	24	---	14	11	---	13	---	321	---	123	38	---
TOTAL	859	594	506	387	300	366	841	4261	6854	3727	1957	1086
MEAN	27.7	19.8	16.3	12.5	10.7	11.8	28.0	137	228	120	63.1	36.2
MAX	34	25	19	14	11	13	67	342	312	172	111	44
MIN	23	18	14	11	10	11	14	34	162	78	38	30
AC-FT	1700	1180	1000	768	595	726	1670	8450	13590	7390	3880	2150

CAL YR 1988 TOTAL 22485.5 MEAN 61.4 MAX 449 MIN 9.0 AC-FT 44600
WTR YR 1989 TOTAL 21738 MEAN 59.6 MAX 342 MIN 10 AC-FT 43120

09047700 KEYSTONE GULCH NEAR DILLON, CO

LOCATION.--Lat 39°35'40", long 105°58'19", in NE¼NE¼ sec.26, T.5 S., R.77 W., Summit County, Hydrologic Unit 14010002, on right bank 0.7 mi upstream from mouth and 4.7 mi southeast of Dillon.

DRAINAGE AREA.--9.10 mi².

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 9,350 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 10 to Apr. 26, Apr. 29 to May 2, May 4, and Sept. 24-30. Records good except for estimated daily discharges, which are poor. No known diversion upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--32 years, 6.01 ft³/s; 4,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 118 ft³/s, June 27, 1983, gage height, 3.01 ft, from rating curve extended above 65 ft³/s; minimum daily discharge, 1.3 ft³/s, Feb. 22, 1967, and Feb. 15, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 35 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
July 25	2100	*35	*2.39	No other peak greater than base discharge.			

Minimum daily, 1.5 ft³/s, Feb. 5-9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	3.8	3.3	2.8	2.0	2.6	2.0	7.7	23	8.1	7.5	3.5
2	3.9	3.3	3.3	2.5	2.0	2.6	2.3	7.5	22	7.5	7.9	3.5
3	3.9	3.3	3.3	2.3	1.8	2.6	2.5	6.2	21	7.3	6.8	3.2
4	3.9	3.3	3.3	2.1	1.6	2.6	3.0	5.8	19	7.3	6.5	2.8
5	4.1	4.3	3.3	2.0	1.5	2.6	3.4	6.4	19	7.1	6.2	3.1
6	4.2	3.8	3.3	2.0	1.5	2.0	4.0	8.1	17	7.0	6.2	3.3
7	4.1	3.5	3.3	2.0	1.5	1.8	4.0	11	16	6.7	6.1	3.2
8	4.0	3.7	3.3	2.0	1.5	1.8	4.0	13	16	6.6	5.9	4.1
9	4.0	3.7	3.3	2.0	1.5	1.8	4.0	14	15	6.6	5.8	4.0
10	3.9	3.8	3.3	2.0	1.9	1.8	4.0	16	14	6.1	6.2	3.7
11	3.9	4.0	3.3	2.0	2.6	1.8	4.0	18	14	6.9	8.0	3.7
12	3.9	4.0	3.3	2.0	2.6	1.8	4.0	18	15	11	7.8	4.2
13	3.9	4.0	3.3	2.0	2.6	1.8	4.0	17	14	9.1	6.8	4.6
14	3.9	4.0	3.3	2.0	2.6	1.8	4.0	15	14	7.0	6.2	4.6
15	3.9	4.0	3.3	2.0	2.6	1.8	4.0	14	13	6.4	5.8	4.4
16	3.9	4.0	3.3	2.0	2.6	1.8	4.0	14	13	6.0	5.7	4.2
17	3.9	4.0	3.3	2.0	2.6	1.8	4.0	13	13	5.9	5.5	4.1
18	3.8	4.0	3.3	2.0	2.6	1.8	4.0	15	12	5.8	5.5	3.9
19	3.7	4.0	3.3	2.0	2.6	1.8	4.5	17	12	5.7	5.1	3.8
20	3.6	4.0	3.3	2.0	2.6	1.8	5.0	19	12	5.4	5.0	4.0
21	3.6	3.6	3.3	2.0	2.6	1.8	5.6	21	12	5.3	5.0	4.1
22	3.6	3.3	3.3	2.0	2.6	1.8	6.0	23	12	5.5	4.8	3.7
23	3.5	3.3	3.3	2.0	2.6	1.8	7.0	24	11	5.5	4.7	3.7
24	3.5	3.3	3.3	2.0	2.6	1.8	8.5	27	11	5.9	4.6	3.6
25	3.5	3.3	3.3	2.0	2.6	1.8	9.4	24	9.9	14	4.5	3.4
26	3.5	3.3	3.3	2.0	2.6	1.8	9.0	23	9.6	11	4.3	3.3
27	3.4	3.3	3.3	2.0	2.6	1.8	9.9	24	9.6	8.0	4.2	3.3
28	3.2	3.3	3.3	2.0	2.6	1.8	7.9	25	8.9	8.2	4.2	3.2
29	3.3	3.3	3.3	2.0	---	1.8	7.6	27	8.6	10	4.1	3.1
30	3.5	3.3	3.3	2.0	---	1.8	7.6	26	8.5	9.4	4.1	3.0
31	3.2	---	3.0	2.0	---	1.8	---	24	---	7.9	3.8	---
TOTAL	116.3	109.8	102.0	63.7	63.6	60.0	153.2	523.7	415.1	230.2	174.8	110.3
MEAN	3.75	3.66	3.29	2.05	2.27	1.94	5.11	16.9	13.8	7.43	5.64	3.68
MAX	4.2	4.3	3.3	2.8	2.6	2.6	9.9	27	23	14	8.0	4.6
MIN	3.2	3.3	3.0	2.0	1.5	1.8	2.0	5.8	8.5	5.3	3.8	2.8
AC-FT	231	218	202	126	126	119	304	1040	823	457	347	219

CAL YR 1988 TOTAL 2457.5 MEAN 6.71 MAX 42 MIN 1.9 AC-FT 4870
WTR YR 1989 TOTAL 2122.7 MEAN 5.82 MAX 27 MIN 1.5 AC-FT 4210

09050100 TENMILE CREEK BELOW NORTH TENMILE CREEK, AT FRISCO, CO

LOCATION.--Lat 39°34'31", long 106°06'36", in SE¼NW¼ sec.34, T.5 S., R.78 W., Summit County, Hydrologic Unit 14010002, on right bank 220 ft upstream from bridge on U.S. Highway 6, 160 ft downstream from North Tenmile Creek, and 0.6 mi west of Frisco.

DRAINAGE AREA.--93.3 mi².

PERIOD OF RECORD.--October 1957 to current year. Prior to October 1971, published as "below North Fork, at Frisco."

GAGE.--Water-stage recorder. Elevation of gage is 9,100 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Apr. 21, 1981 at site 720 ft downstream at different datum.

REMARKS.--Estimated daily discharges: Nov. 10, 12, 16-21, Dec. 7-19, Dec. 27 to Feb. 14, Feb. 16-17, 22, 24, 28, Mar. 1, 4-26, Mar. 29 to Apr. 1, Apr. 3-5, and Apr. 10. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by a few small diversions upstream from station for irrigation and municipal use and transbasin diversion from Robinson Reservoir, capacity, 2,520 acre-ft, in Eagle River basin. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--32 years, 99.1 ft³/s; 71,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,910 ft³/s, June 16, 1965, gage height, 6.15 ft, from rating curve extended above 750 ft³/s; minimum daily, 7 ft³/s, Mar. 8, 14, 1960.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 29	2230	*663	*3.88				

Minimum daily, 11 ft³/s, Mar. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	15	15	19	15	16	24	68	461	193	93	27
2	24	17	14	19	15	11	24	60	432	182	116	26
3	23	18	18	19	15	13	24	60	388	168	93	24
4	21	18	17	19	15	17	23	66	308	162	83	25
5	23	22	15	18	15	17	21	71	308	154	78	25
6	28	21	18	18	14	17	19	97	343	147	76	25
7	30	21	18	18	14	18	23	137	336	137	74	21
8	29	18	18	18	14	18	29	190	343	129	69	23
9	33	22	18	18	14	18	32	230	336	121	64	26
10	31	19	18	18	13	18	30	246	343	121	69	26
11	27	18	18	18	13	18	29	268	362	124	67	25
12	27	19	18	18	13	19	26	258	416	162	80	29
13	27	20	19	17	13	19	26	224	369	160	74	39
14	24	18	19	17	13	19	25	210	336	126	68	37
15	23	19	19	17	15	19	29	174	373	113	63	37
16	21	19	19	17	13	19	31	164	448	105	62	35
17	22	19	19	17	13	19	36	157	469	99	60	34
18	22	19	19	17	14	20	49	182	420	94	63	33
19	22	19	19	17	14	20	57	246	432	89	53	31
20	22	19	19	17	14	20	69	369	392	84	60	33
21	22	19	19	16	14	20	97	424	336	78	54	33
22	20	19	18	16	15	20	111	444	265	78	51	31
23	18	22	19	16	14	21	113	495	240	89	45	31
24	18	20	20	16	15	21	126	512	230	115	41	30
25	18	19	20	16	16	21	137	452	230	128	40	30
26	18	16	21	16	16	21	133	377	228	107	37	32
27	18	13	20	16	14	21	121	412	227	91	39	28
28	18	15	19	16	16	22	101	465	219	96	36	28
29	18	18	19	15	---	23	83	537	210	113	31	27
30	17	17	19	15	---	24	80	548	199	113	30	26
31	16	---	19	15	---	24	---	499	---	95	28	---
TOTAL	704	558	570	529	399	593	1728	8642	9999	3773	1902	877
MEAN	22.7	18.6	18.4	17.1	14.2	19.1	57.6	279	333	122	61.4	29.2
MAX	33	22	21	19	16	24	137	548	469	193	116	39
MIN	16	13	14	15	13	11	19	60	199	78	28	21
AC-FT	1400	1110	1130	1050	791	1180	3430	17140	19830	7480	3770	1740

CAL YR 1988 TOTAL 32574 MEAN 89.0 MAX 751 MIN 13 AC-FT 64610
WTR YR 1989 TOTAL 30274 MEAN 82.9 MAX 548 MIN 11 AC-FT 60050

09050700 BLUE RIVER BELOW DILLON, CO

LOCATION.--Lat 39°37'32", long 106°03'57", in SE¼SE¼ sec.12, T.5 S., R.78 W., Summit County, Hydrologic Unit 14010002, on right bank 0.3 mi downstream from Dillon Dam, 0.1 mi upstream from Straight Creek, and 1.1 mi west of Dillon.

DRAINAGE AREA.--335 mi².

PERIOD OF RECORD.--January 1960 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 8,760 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Aug. 3, 4. Records good. Flow regulated since Sept. 3, 1963, by Dillon Reservoir, 0.3 mi upstream (station 09050600). Natural flow of stream affected by transmountain diversions, transbasin diversions, and diversions upstream from station for irrigation of about 400 acres of hay meadows. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--26 years (water years 1964-89), 212 ft³/s; 153,600 acre-ft/yr, since completion of Dillon Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,010 ft³/s, May 25, 1984, gage height, 3.88 ft; maximum gage height, 3.95 ft, June 22, 1983; no flow, Sept. 4 to Nov. 19, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 972 ft³/s at 0600 June 19, gage height, 2.76 ft; minimum daily, 38 ft³/s, Jan. 3, 8-10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	161	53	40	43	87	92	283	666	175	81	60
2	99	157	53	40	43	87	92	183	686	161	87	46
3	101	129	51	38	43	84	82	81	718	133	87	46
4	101	72	51	39	44	87	95	92	654	121	87	46
5	101	71	50	40	44	87	92	89	582	103	89	46
6	101	70	51	40	44	88	92	96	537	80	92	46
7	98	69	51	39	43	95	82	98	546	53	70	46
8	98	69	50	38	43	103	92	98	540	54	110	45
9	102	68	49	38	43	95	89	98	570	50	145	44
10	101	69	46	38	44	89	89	98	648	70	147	44
11	101	69	47	39	44	92	91	98	722	114	143	45
12	101	67	46	40	43	92	92	98	804	72	140	46
13	101	68	46	40	43	93	92	99	846	50	140	46
14	101	69	43	40	45	95	92	101	846	50	134	46
15	102	56	43	40	47	96	92	101	804	49	129	46
16	103	48	43	40	47	95	94	101	877	49	129	46
17	101	47	44	40	52	97	98	101	944	80	129	46
18	101	48	43	41	71	98	98	98	958	74	123	46
19	101	48	43	41	85	96	98	98	959	71	123	66
20	101	48	41	41	89	95	92	99	860	89	123	101
21	98	49	41	41	88	95	183	101	706	84	123	101
22	99	77	40	40	91	95	297	101	603	80	103	101
23	101	49	40	40	88	96	326	101	529	79	81	101
24	101	49	40	41	89	98	309	101	435	79	81	101
25	101	49	40	41	87	98	291	98	367	79	84	101
26	89	50	40	41	87	98	291	96	304	79	86	102
27	82	51	40	41	87	98	291	98	260	76	91	103
28	84	53	40	41	87	95	287	129	249	78	95	103
29	84	51	39	42	---	94	285	300	219	79	94	103
30	84	52	40	43	---	95	283	526	197	84	92	103
31	126	---	40	43	---	84	---	633	---	87	87	---
TOTAL	3062	2033	1384	1246	1704	2897	4679	4494	18636	2582	3325	2022
MEAN	98.8	67.8	44.6	40.2	60.9	93.5	156	145	621	83.3	107	67.4
MAX	126	161	53	43	91	103	326	633	959	175	147	103
MIN	82	47	39	38	43	84	82	81	197	49	70	44
AC-FT	6070	4030	2750	2470	3380	5750	9280	8910	36960	5120	6600	4010

CAL YR 1988 TOTAL 65212 MEAN 178 MAX 1490 MIN 39 AC-FT 129300
WTR YR 1989 TOTAL 48064 MEAN 132 MAX 959 MIN 38 AC-FT 95330

09051050 STRAIGHT CREEK BELOW LASKEY GULCH NR DILLON, CO

LOCATION.--Lat 39°38'23", long 106°02'23", in SW¼SW¼ sec.5, T.5 S., R.77 W., Summit County, Hydrologic Unit 14010002, on left bank, 120 ft upstream from culverts on Deer Trail Drive, in the community of Dillon Valley, 0.9 mi north of Dillon, 1.1 mi downstream of Laskey Gulch and 1.8 mi upstream from mouth.

DRAINAGE AREA.--18.3 mi^2.

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,070 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 6, 15-22, Nov. 27 to Feb. 24, Mar. 4-6, 8-18, 20-22, 24-26, 28-31, Apr. 2-6, and Apr. 10-15. Records fair except for estimated daily discharges, which are poor. Diversion upstream from station for municipal purposes downstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 104 ft^3/s, June 10, 1988, gage height, 5.28 ft from floodmark; minimum daily, 2.4 ft^3/s, Dec. 22, 1987, Feb. 20, 22, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 76 ft^3/s at 1900 May 29, gage height, 5.09 ft, maximum gage height, 5.71 ft at 0700 Mar. 5 (backwater from ice); minimum daily discharge, 3.5 ft^3/s, Feb. 4-9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	9.2	6.2	4.6	4.5	4.5	5.9	12	58	33	19	4.9
2	6.1	8.9	5.6	4.8	4.5	4.6	6.2	12	55	31	20	4.6
3	5.9	7.9	5.4	4.8	4.0	4.4	6.2	12	51	29	19	4.1
4	6.3	7.9	5.4	4.5	3.5	4.9	6.2	11	46	28	17	4.2
5	7.2	7.6	5.4	4.5	3.5	4.9	6.4	12	47	27	17	4.3
6	8.1	7.6	5.2	4.8	3.5	4.9	6.4	12	47	26	17	4.0
7	7.3	8.2	5.4	4.8	3.5	4.5	6.6	14	48	25	15	3.8
8	7.3	8.5	5.4	4.8	3.5	5.4	6.6	16	48	25	14	4.0
9	7.1	9.4	5.2	4.8	3.5	5.6	6.9	16	46	25	14	4.3
10	7.4	10	5.2	4.8	3.6	5.6	7.2	18	45	23	17	4.4
11	7.5	10	5.2	4.8	3.6	5.8	7.5	21	46	30	16	4.1
12	6.8	8.4	5.2	4.8	3.6	6.0	7.6	20	47	31	17	5.5
13	7.1	7.2	5.2	4.8	3.6	5.8	7.8	18	45	26	17	6.0
14	7.4	9.0	5.2	4.8	3.6	5.8	8.0	17	45	23	15	5.1
15	7.1	7.4	5.2	4.8	3.6	5.8	8.2	16	48	22	14	4.6
16	7.0	6.8	5.2	4.8	3.8	5.8	8.5	15	56	21	13	4.0
17	6.6	7.6	5.0	4.5	4.0	5.6	9.4	15	57	19	13	4.0
18	6.8	7.6	4.9	4.5	4.0	5.6	10	17	56	19	13	3.7
19	6.8	7.2	4.9	4.5	4.1	5.6	11	19	53	18	12	4.2
20	7.4	7.0	4.9	4.5	4.1	5.4	13	23	53	17	12	5.1
21	7.5	7.2	4.9	4.5	4.1	5.4	15	25	51	16	12	4.5
22	7.1	7.2	4.9	4.5	4.1	5.0	15	29	45	18	11	4.2
23	6.8	7.7	4.9	4.5	4.1	4.3	15	37	41	19	10	4.1
24	6.7	7.4	4.9	4.5	4.4	4.8	16	44	37	19	9.3	4.0
25	7.0	7.4	4.9	4.5	4.3	5.6	16	40	34	20	8.7	4.1
26	6.6	7.4	4.9	4.5	4.0	5.6	15	34	34	19	8.6	3.9
27	6.4	6.8	4.9	4.5	4.3	5.8	15	38	33	16	8.2	3.9
28	6.8	6.6	5.0	4.5	4.4	6.0	13	50	32	19	7.8	4.0
29	7.9	6.2	4.9	4.5	---	6.0	12	58	33	26	7.1	3.9
30	7.9	6.4	4.9	4.5	---	6.2	12	59	35	22	7.0	3.9
31	8.3	---	4.8	4.5	---	6.2	---	59	---	19	6.0	---
TOTAL	218.7	233.7	159.2	143.5	109.3	167.4	299.6	789	1372	711	406.7	129.4
MEAN	7.05	7.79	5.14	4.63	3.90	5.40	9.99	25.5	45.7	22.9	13.1	4.31
MAX	8.3	10	6.2	4.8	4.5	6.2	16	59	58	33	20	6.0
MIN	5.9	6.2	4.8	4.5	3.5	4.3	5.9	11	32	16	6.0	3.7
AC-FT	434	464	316	285	217	332	594	1560	2720	1410	807	257

CAL YR 1988 TOTAL 5470.0 MEAN 14.9 MAX 98 MIN 2.4 AC-FT 10850
WTR YR 1989 TOTAL 4739.5 MEAN 13.0 MAX 59 MIN 3.5 AC-FT 9400

09052000 ROCK CREEK NEAR DILLON, CO

LOCATION.--Lat 39°43'23", long 106°07'41", in NE¼ sec.9, T.4 S., R.78 W., Summit County, Hydrologic Unit 14010002, on right bank 500 ft upstream from bridge on State Highway 9, 1,100 ft upstream from mouth, 1,200 ft downstream from confluence of North and South Rock Creeks, and 8 mi northwest of Dillon.

DRAINAGE AREA.--15.8 mi^2.

PERIOD OF RECORD.--July 1942 to September 1956, October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 8,502.52 ft, (Colorado Highway Department datum). Prior to Apr. 21, 1943, nonrecording gage, and Apr. 21, 1943, to Sept. 13, 1950, water-stage recorder, at site 500 ft downstream at datum 28.76 ft, lower.

REMARKS.--Estimated discharges: Nov. 10, 12, and Nov. 16 to Apr. 27. Records good except for estimated daily discharges, which are poor. A few small diversions for irrigation of hay meadows upstream and downstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--37 years, (water years 1943-56, 1967-89), 23.0 ft^3/s; 16,660 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 289 ft^3/s, June 10, 1973, gage height, 4.35 ft, from rating curve extended above 154 ft^3/s; maximum gage height, 4.36 ft, June 24, 1971; minimum daily discharge, 1.8 ft^3/s, Mar. 28 to Apr. 1, 1989.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 160 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 17	0100	*105	*3.61				

Minimum daily, 1.5 ft^3/s, Mar. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	6.9	7.0	4.8	2.9	2.6	2.6	13	76	50	27	10
2	7.6	6.9	7.0	4.8	2.9	2.6	2.7	13	76	46	43	10
3	7.6	7.5	7.0	4.8	2.8	2.6	2.7	12	69	44	33	9.5
4	7.8	6.9	7.0	4.8	2.7	2.6	2.7	12	58	45	28	9.5
5	9.5	7.3	7.0	4.5	2.6	2.6	2.6	12	55	43	25	9.6
6	9.6	8.8	6.6	4.0	2.6	2.4	2.9	17	66	42	22	9.5
7	9.2	7.6	6.0	3.6	2.6	2.0	3.7	28	67	42	21	9.3
8	8.9	7.3	5.4	3.2	2.6	2.0	4.6	46	65	39	19	9.6
9	9.0	7.2	5.0	3.0	2.6	2.0	4.5	60	63	35	18	11
10	9.0	7.5	4.8	3.0	2.6	2.0	4.4	75	61	34	20	11
11	8.9	7.8	4.8	3.0	2.6	2.0	4.3	72	66	36	20	9.8
12	8.5	7.5	4.8	3.0	2.6	2.0	4.0	61	70	49	25	11
13	8.1	7.5	4.8	3.0	2.6	2.0	3.6	49	55	50	25	13
14	8.2	7.0	4.8	3.0	2.6	2.0	4.0	42	52	39	21	12
15	7.9	7.4	4.8	3.0	2.6	1.9	4.3	34	64	32	19	11
16	7.8	7.2	4.8	3.0	2.6	1.8	6.0	29	80	29	17	10
17	7.7	7.1	4.8	3.0	2.6	1.7	7.4	27	87	28	16	9.5
18	7.6	7.0	4.8	3.0	2.6	1.7	9.5	33	71	25	16	9.3
19	7.6	7.0	4.8	3.0	2.6	1.7	13	54	79	24	17	9.6
20	7.8	7.0	4.8	3.0	2.6	1.8	21	69	78	24	24	11
21	7.5	7.0	4.8	3.0	2.6	1.6	34	76	69	24	19	12
22	7.3	7.0	4.8	3.0	2.6	1.6	33	74	42	24	17	11
23	7.1	7.0	4.8	3.0	2.6	1.5	33	89	35	25	16	10
24	7.1	7.0	4.8	3.0	2.6	1.6	32	87	35	42	15	9.8
25	7.1	7.0	4.8	3.0	2.6	1.6	30	75	47	37	14	9.3
26	7.0	7.0	4.8	3.0	2.6	1.6	29	54	48	45	13	9.2
27	6.9	7.0	4.8	3.0	2.6	1.7	27	58	50	34	13	9.0
28	6.7	7.0	4.8	3.0	2.6	1.8	19	78	52	45	12	8.9
29	6.9	7.0	4.8	3.0	---	2.0	15	89	54	42	11	8.7
30	7.6	7.0	4.8	3.0	---	2.2	13	89	51	33	11	8.6
31	7.0	---	4.8	3.0	---	2.4	---	81	---	27	11	---
TOTAL	244.1	216.4	163.6	103.5	73.7	61.6	375.5	1608	1841	1134	608	301.7
MEAN	7.87	7.21	5.28	3.34	2.63	1.99	12.5	51.9	61.4	36.6	19.6	10.1
MAX	9.6	8.8	7.0	4.8	2.9	2.6	34	89	87	50	43	13
MIN	6.7	6.9	4.8	3.0	2.6	1.5	2.6	12	35	24	11	8.6
AC-FT	484	429	325	205	146	122	745	3190	3650	2250	1210	598

CAL YR 1988 TOTAL 7475.1 MEAN 20.4 MAX 163 MIN 2.3 AC-FT 14830
WTR YR 1989 TOTAL 6731.1 MEAN 18.4 MAX 89 MIN 1.5 AC-FT 13350

09052400 BOULDER CREEK AT UPPER STATION, NEAR DILLON, CO

LOCATION.--Lat 39°43'41", long 106°10'22", in SW¼SW¼ sec.6, T.4 S., R.78 W., Summit County, Hydrologic Unit 14010002, on left bank 1.2 mi downstream from Boulder Lake, 3.2 mi upstream from mouth, and 9.4 mi northwest of Dillon.

DRAINAGE AREA.--8.56 mi^2.

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,460 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 5 to Apr. 27, May 19 to June 5, June 26 to July 6, and Sept. 18-30. Records fair except for estimated daily discharges, which are poor. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--23 years, 17.1 ft^3/s; 12,390 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 316 ft^3/s, July 1, 1984, gage height, 3.42 ft; minimum daily, 0.80 ft^3/s, Jan. 6, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 120 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 16	1900	*117	*2.53				

Minimum daily, 1.3 ft^3/s, Feb. 3-10.

REVISIONS.--The maximum discharge for water year 1988 was published in error, the correct figure is 183 ft^3/s at 2300 June 5, gage height, 2.90 ft. This figure supersedes that published in the report for 1988.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	2.0	3.3	3.3	1.7	1.8	2.9	11	64	46	21	7.7
2	3.2	2.3	3.3	3.3	1.5	1.8	2.8	7.0	58	42	40	7.5
3	3.0	2.5	3.3	3.0	1.3	1.8	2.8	5.7	49	38	32	7.4
4	3.1	2.4	3.3	2.6	1.3	1.8	2.6	5.9	44	40	26	7.1
5	4.4	2.4	3.3	2.3	1.3	1.8	2.5	6.1	43	41	23	7.1
6	5.6	2.4	3.3	2.0	1.3	1.8	2.5	9.0	53	39	19	7.2
7	5.2	2.4	3.3	2.0	1.3	1.8	2.6	18	54	42	17	6.9
8	4.5	2.4	3.3	2.0	1.3	1.8	2.8	37	54	37	15	7.4
9	4.4	2.4	3.3	2.0	1.3	1.8	3.2	52	49	32	14	8.3
10	4.3	2.4	3.3	2.0	1.3	2.0	3.5	58	48	32	15	8.1
11	4.4	2.4	3.3	2.0	1.7	2.1	3.3	52	50	32	16	8.0
12	4.3	2.4	3.3	2.0	1.8	2.1	3.2	46	54	45	18	7.7
13	4.2	2.4	3.3	2.0	1.8	2.1	3.1	40	44	38	17	8.3
14	4.2	2.4	3.3	2.0	1.8	2.1	3.0	39	46	30	15	8.1
15	3.8	2.4	3.3	2.0	1.8	2.1	3.5	32	62	25	13	7.3
16	3.5	2.4	3.3	2.0	1.8	2.1	4.2	30	86	23	12	6.5
17	3.2	2.4	3.3	2.0	1.8	2.1	5.0	31	77	21	11	6.3
18	3.4	2.4	3.3	2.0	1.8	2.1	6.2	47	69	20	12	5.8
19	3.3	2.4	3.3	2.0	1.8	2.1	7.4	43	76	18	12	5.0
20	3.4	2.4	3.3	2.0	1.8	2.1	10	53	77	19	13	4.5
21	3.1	2.4	3.3	2.0	1.8	2.1	12	72	60	18	12	4.6
22	2.8	2.4	3.3	2.0	1.8	2.1	16	66	38	19	12	5.0
23	2.6	2.4	3.3	2.0	1.8	2.0	15	76	32	22	11	5.7
24	2.5	2.4	3.3	2.0	1.8	1.8	14	80	34	28	10	6.4
25	2.6	2.4	3.3	1.7	1.8	1.8	13	68	46	27	9.9	5.4
26	2.6	2.6	3.3	1.7	1.8	1.8	12	40	46	31	9.4	5.0
27	2.5	2.8	3.3	1.7	1.8	1.9	12	35	49	30	8.9	4.8
28	2.4	3.1	3.3	1.7	1.8	1.9	9.9	54	52	45	8.6	4.5
29	2.4	3.3	3.3	1.7	---	2.2	10	82	54	46	8.4	4.3
30	2.5	3.3	3.3	1.7	---	2.5	11	86	50	31	8.3	4.0
31	2.4	---	3.3	1.7	---	2.7	---	72	---	23	7.7	---
TOTAL	107.4	74.7	102.3	64.4	45.9	62.0	202.0	1353.7	1618	980	467.2	191.9
MEAN	3.46	2.49	3.30	2.08	1.64	2.00	6.73	43.7	53.9	31.6	15.1	6.40
MAX	5.6	3.3	3.3	3.3	1.8	2.7	16	86	86	46	40	8.3
MIN	2.4	2.0	3.3	1.7	1.3	1.8	2.5	5.7	32	18	7.7	4.0
AC-FT	213	148	203	128	91	123	401	2690	3210	1940	927	381

CAL YR 1988 TOTAL 5511.0 MEAN 15.1 MAX 132 MIN 2.0 AC-FT 10930
WTR YR 1989 TOTAL 5269.5 MEAN 14.4 MAX 86 MIN 1.3 AC-FT 10450

09052800 SLATE CREEK AT UPPER STATION, NEAR DILLON, CO

LOCATION.--Lat 39°45'47", long 106°11'31", in SW¼NW¼ sec.25, T.3 S., R.79 W., Summit County, Hydrologic Unit 14010002, on left bank 0.2 mi upstream from unnamed tributary, 2.7 mi upstream from mouth, and 12 mi northwest of Dillon.

DRAINAGE AREA.--14.2 mi^2.

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,040 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 15-20, Nov. 24 to Apr. 19, July 10, 11, and Sept. 17-28. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--23 years, 26.2 ft^3/s; 18,980 acre-ft/yr. The figure published in the 1988 report was in error; the correct figure is 22 years, 26.4 ft^3/s, 19,130 acre ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 485 ft^3/s, Aug. 5, 1983, gage height, 6.14 ft, from rating curve extended above 170 ft^3/s; maximum gage height, 6.56 ft, May 2, 1975 (backwater from beaver dam and ice); minimum daily discharge, 1.0 ft^3/s, Mar. 14, 1974, and Jan. 12, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 160 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 16	2000	*169	*4.59	No other peak greater than base discharge.			

Minimum daily, 1.8 ft^3/s, Feb. 2-10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	4.8	2.5	2.0	1.9	2.6	3.6	13	90	77	34	7.7
2	5.5	4.8	2.5	2.0	1.8	2.6	3.9	14	85	73	61	7.5
3	5.4	5.5	2.5	2.0	1.8	2.6	3.9	14	82	72	56	7.2
4	5.3	5.9	2.5	2.0	1.8	2.8	3.9	13	69	72	43	7.1
5	6.6	5.9	2.5	2.0	1.8	3.0	3.9	13	69	70	37	7.0
6	7.1	5.9	2.5	2.0	1.8	3.3	3.9	16	84	72	30	6.7
7	7.0	5.7	2.5	2.0	1.8	3.3	4.2	27	79	65	25	6.5
8	6.5	5.8	2.5	2.0	1.8	3.3	4.7	42	81	58	22	7.0
9	6.5	6.9	2.4	2.0	1.8	3.3	5.2	55	74	60	20	8.6
10	6.4	7.2	2.2	2.0	1.8	3.3	6.0	68	74	66	20	8.5
11	6.2	6.2	2.0	2.0	2.0	3.3	6.8	73	79	75	21	8.0
12	5.8	7.2	2.0	2.0	2.2	3.3	7.4	65	87	83	22	8.0
13	5.7	6.2	2.0	2.0	2.3	3.3	8.0	54	74	90	22	9.0
14	5.6	5.9	2.0	2.0	2.5	3.3	8.0	49	73	68	19	8.8
15	5.6	6.0	2.0	2.0	2.6	3.3	8.0	40	98	57	17	8.1
16	5.4	6.0	2.0	2.0	2.6	3.3	8.0	34	128	50	15	7.4
17	5.2	6.0	2.0	2.0	2.6	3.3	10	31	120	47	14	7.0
18	5.1	6.0	2.0	2.0	2.6	3.3	12	31	109	43	14	6.2
19	5.2	6.0	2.0	2.0	2.6	3.3	15	49	116	40	16	6.2
20	5.3	6.0	2.0	2.0	2.6	3.3	16	63	114	39	17	6.2
21	5.3	5.9	2.0	2.0	2.6	3.3	31	77	85	38	16	6.2
22	5.2	3.6	2.0	2.0	2.6	3.3	36	74	57	37	14	6.2
23	5.0	2.8	2.0	2.0	2.6	3.3	38	95	51	36	12	6.2
24	4.9	2.5	2.0	2.0	2.6	3.3	36	102	56	45	12	6.2
25	4.8	2.5	2.0	2.0	2.6	3.3	37	90	66	40	11	6.2
26	4.8	2.5	2.0	2.0	2.6	3.3	42	63	63	69	10	6.2
27	4.6	2.5	2.0	2.0	2.6	3.3	34	57	67	47	9.7	6.2
28	4.5	2.5	2.0	2.0	2.6	3.3	24	74	72	61	8.9	6.2
29	4.6	2.5	2.0	2.0	---	3.3	18	104	74	58	8.7	5.7
30	5.1	2.5	2.0	2.0	---	3.3	15	111	78	47	8.4	5.5
31	5.0	---	2.0	2.0	---	3.3	---	105	---	38	8.0	---
TOTAL	170.7	149.7	66.6	62.0	63.5	99.4	453.4	1716	2454	1793	643.7	209.5
MEAN	5.51	4.99	2.15	2.00	2.27	3.21	15.1	55.4	81.8	57.8	20.8	6.98
MAX	7.1	7.2	2.5	2.0	2.6	3.3	42	111	128	90	61	9.0
MIN	4.5	2.5	2.0	2.0	1.8	2.6	3.6	13	51	36	8.0	5.5
AC-FT	339	297	132	123	126	197	899	3400	4870	3560	1280	416

CAL YR 1988 TOTAL 8508.2 MEAN 23.2 MAX 184 MIN 2.0 AC-FT 16880
WTR YR 1989 TOTAL 7881.5 MEAN 21.6 MAX 128 MIN 1.8 AC-FT 15630

09054000 BLACK CREEK BELOW BLACK LAKE, NEAR DILLON, CO

LOCATION.--Lat 39°47'59", long 106°16'04", in SW¼SW¼ sec.8, T.3 S., R.79 W., Summit County, Hydrologic Unit 14010002, on right bank 600 ft upstream from bridge, 0.3 mi downstream from Black Lake, 4.5 mi upstream from highwater line of Green Mountain Reservoir at elevation 7,950 ft, and 17 mi northwest of Dillon.

DRAINAGE AREA.--15.0 mi².

PERIOD OF RECORD.--July 1942 to September 1949, October 1966 to current year.

REVISED RECORDS.--WSP 2124: Drainage area, WDR CO-77-2: 1976.

GAGE.--Water-stage recorder. Elevation of gage is 8,750 ft above National Geodetic Vertical Datum of 1929, from topographic map. July 17, 1942, to May 27, 1943, nonrecording gage, and May 28, 1943, to Sept. 30, 1949, water-stage recorder at site 600 ft downstream at different datums.

REMARKS.--Estimated daily discharges: Nov. 6 to Apr. 20. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--30 years, 32.3 ft³/s; 23,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 555 ft³/s, June 25, 1983, gage height, 4.74 ft, from rating curve extended above 240 ft³/s, maximum gage height, 5.64 ft, June 30, 1984; minimum daily discharge, 1.3 ft³/s, Feb. 22, 1976, Jan. 10, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 160 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
June 17	0700	*191	*4.38	No other peak greater than base discharge.			

Minimum daily discharge, 2.0 ft³/s, Feb. 7-15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	3.2	2.6	2.3	2.1	2.4	6.0	38	97	92	55	16
2	6.2	3.2	2.6	2.3	2.1	2.5	6.0	34	95	89	81	15
3	5.8	2.9	2.6	2.3	2.1	2.5	6.0	34	92	85	76	14
4	5.5	2.6	2.6	2.3	2.1	2.5	6.0	32	79	85	61	12
5	5.4	2.6	2.6	2.3	2.1	2.6	6.0	30	80	86	53	12
6	5.4	2.6	2.6	2.3	2.1	2.6	7.0	33	92	87	46	12
7	5.4	2.6	2.6	2.3	2.0	2.6	8.0	43	82	90	41	11
8	5.4	2.6	2.5	2.3	2.0	2.7	9.0	69	82	81	38	11
9	5.4	2.6	2.5	2.3	2.0	2.7	8.8	83	77	76	36	13
10	5.4	2.6	2.5	2.3	2.0	2.7	8.6	90	75	77	39	15
11	5.4	2.6	2.5	2.2	2.0	2.8	8.4	88	81	88	40	14
12	5.4	2.6	2.5	2.2	2.0	2.8	8.2	78	90	90	40	13
13	5.5	2.7	2.5	2.2	2.0	2.8	8.0	65	80	101	39	16
14	5.5	2.7	2.5	2.2	2.0	2.9	10	59	74	80	36	16
15	5.4	2.7	2.5	2.2	2.0	2.9	13	52	89	71	32	15
16	5.3	2.7	2.5	2.2	2.1	2.9	17	48	123	64	30	13
17	5.0	2.7	2.5	2.2	2.1	3.0	20	46	158	62	28	11
18	5.2	2.7	2.5	2.2	2.1	3.0	27	46	108	59	30	10
19	4.9	2.7	2.4	2.2	2.1	3.0	33	68	128	57	33	9.7
20	4.6	2.7	2.4	2.2	2.2	3.1	42	80	131	57	33	9.3
21	4.6	2.7	2.4	2.2	2.2	3.1	54	94	116	57	32	9.8
22	4.5	2.7	2.4	2.2	2.2	3.2	66	83	73	58	28	9.8
23	4.3	2.7	2.4	2.2	2.2	3.3	68	109	61	55	25	9.6
24	4.2	2.7	2.4	2.1	2.3	3.5	71	111	56	64	24	8.6
25	4.0	2.7	2.4	2.1	2.3	4.0	70	94	71	59	23	7.5
26	3.9	2.7	2.4	2.1	2.3	4.5	64	69	79	80	21	7.0
27	3.6	2.6	2.4	2.1	2.4	5.0	56	65	79	63	19	6.6
28	3.6	2.6	2.4	2.1	2.4	5.4	49	88	86	69	18	5.8
29	3.6	2.6	2.4	2.1	---	6.0	46	118	87	120	17	5.5
30	3.6	2.6	2.3	2.1	---	6.0	43	123	90	76	17	5.0
31	3.3	---	2.3	2.1	---	6.0	---	115	---	60	16	---
TOTAL	151.9	80.9	76.7	68.4	59.5	105.0	845.0	2191	2715	2338	1107	333.2
MEAN	4.90	2.70	2.47	2.21	2.12	3.39	28.2	70.7	90.5	75.4	35.7	11.1
MAX	6.6	3.2	2.6	2.3	2.4	6.0	71	123	158	120	81	16
MIN	3.3	2.6	2.3	2.1	2.0	2.4	6.0	30	56	55	16	5.0
AC-FT	301	160	152	136	118	208	1680	4350	5390	4640	2200	661

CAL YR 1988 TOTAL 9802.1 MEAN 26.8 MAX 218 MIN 2.3 AC-FT 19440
WTR YR 1989 TOTAL 10071.6 MEAN 27.6 MAX 158 MIN 2.0 AC-FT 19980

09055300 CATARACT CREEK NEAR KREMMLING, CO

LOCATION.--Lat 39°50'07", long 106°18'57", in SW¼NE¼ sec.35, T.2 S., R.80 W., Summit County, Hydrologic Unit 14010002, on right bank 70 ft downstream from lower Cataract Lake, 2.8 mi upstream from highwater line of Green Mountain Reservoir at elevation 7,950 ft, and 17 mi south of Kremmling.

DRAINAGE AREA.--12.0 mi².

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,605 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Jan. 7 to Mar. 9. Records good. No diversion upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--23 years, 14.8 ft³/s; 14,780 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 353 ft³/s, June 25, 1983, gage height, 5.20 ft, maximum gage height, 5.43 ft, June 21, 1967; minimum daily discharge, 0.28 ft³/s, Oct. 7, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 160 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
June 17	0500	*161	*3.92	No other peak greater than base discharge.			

Minimum daily discharge, 0.52 ft³/s, Oct. 28, 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	.60	1.4	1.3	.80	1.2	3.4	16	73	35	29	2.5
2	1.3	.57	1.4	1.2	.80	1.2	3.2	14	73	33	30	2.4
3	1.3	4.0	1.4	1.1	1.0	1.2	3.4	14	68	33	32	2.2
4	1.3	3.5	1.3	1.0	1.4	1.2	3.3	13	51	33	28	2.1
5	1.3	2.3	1.3	1.1	1.5	1.2	2.9	12	47	33	24	2.0
6	1.4	1.8	1.2	1.1	1.5	1.2	2.8	14	61	33	20	1.9
7	1.4	1.5	1.2	1.0	1.5	1.2	2.9	25	50	33	18	1.8
8	1.5	1.3	1.2	1.0	1.5	1.2	3.6	36	53	32	15	1.4
9	1.5	1.8	1.2	1.0	1.5	1.2	4.3	56	49	30	13	1.2
10	1.5	1.9	1.2	1.0	1.5	1.3	4.2	65	45	28	12	1.2
11	1.5	1.9	1.2	1.0	1.5	1.5	4.1	81	53	28	12	1.2
12	1.5	1.8	1.1	1.0	1.5	1.8	3.7	67	67	31	11	1.2
13	1.4	1.3	1.1	1.0	1.5	2.1	3.5	43	54	35	11	1.4
14	1.3	1.2	1.1	1.0	1.5	2.1	3.4	37	47	32	11	1.6
15	1.3	1.4	1.1	1.0	1.5	2.1	3.9	35	58	29	9.3	1.7
16	1.2	1.4	1.1	1.0	1.5	1.9	5.6	32	91	25	8.5	1.7
17	1.1	1.4	1.1	1.0	1.5	1.9	8.0	29	124	22	8.1	1.6
18	1.0	1.4	1.1	1.0	1.5	1.9	11	29	77	20	7.2	1.6
19	.89	1.4	1.1	1.0	1.5	1.9	15	37	90	18	6.9	1.5
20	.87	1.4	1.2	1.0	1.5	2.1	21	60	92	17	6.9	1.4
21	.92	1.4	1.3	1.0	1.5	2.0	33	86	74	16	7.0	1.2
22	.88	1.3	1.3	1.0	1.5	1.8	39	79	40	16	6.3	1.4
23	.82	1.3	1.3	1.0	1.5	1.8	38	110	32	16	5.7	2.1
24	.80	1.3	1.3	1.0	1.3	1.7	37	117	29	18	4.7	2.5
25	.80	1.3	1.4	1.0	1.2	1.8	35	97	31	19	4.2	2.1
26	.81	1.4	1.4	1.0	1.2	2.0	33	55	32	40	3.8	1.8
27	.56	1.4	1.5	1.0	1.2	2.2	32	43	32	32	3.4	1.6
28	.52	1.4	1.5	1.0	1.2	2.2	30	79	33	29	3.0	1.6
29	.52	1.4	1.4	.96	---	2.9	24	120	34	36	2.8	1.5
30	.54	1.4	1.4	.86	---	3.3	20	130	35	38	2.7	1.3
31	.56	---	1.3	.80	---	3.1	---	96	---	33	2.6	---
TOTAL	33.49	47.47	39.1	31.42	38.60	56.2	434.3	1727	1695	873	359.1	50.7
MEAN	1.08	1.58	1.26	1.01	1.38	1.81	14.5	55.7	56.5	28.2	11.6	1.69
MAX	1.5	4.0	1.5	1.3	1.5	3.3	39	130	124	40	32	2.5
MIN	.52	.57	1.1	.80	.80	1.2	2.8	12	29	16	2.6	1.2
AC-FT	66	94	78	62	77	111	861	3430	3360	1730	712	101

CAL YR 1988 TOTAL 7669.88 MEAN 21.0 MAX 238 MIN .52 AC-FT 15210
WTR YR 1989 TOTAL 5385.38 MEAN 14.8 MAX 130 MIN .52 AC-FT 10680

RESERVOIRS IN BLUE RIVER BASIN

09050600 DILLON RESERVOIR.--Lat 39°37'14", long 106°03'53", in NE¼ sec.13, T.5 S., R.78 W., Summit County, Hydrologic Unit 14010002, in gatehouse at dam, 0.8 mi upstream from Straight Creek, about 1.3 mi southwest of Dillon, and 3.5 mi northeast of Frisco. DRAINAGE AREA, 335 mi^2. PERIOD OF RECORD, September 1963 to current year. GAGE, nonrecording gage read once daily. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Denver Board of Water Commissioners); gage readings have been reduced to elevations above National Geodetic Vertical Datum of 1929.

Reservoir is earth and rockfill dam. Dam completed and storage began Sept. 3, 1963; dead storage pool filled Sept. 12, 1963. Capacity, 254,000 acre-ft between elevations 8,829.00 ft, invert of outlet valve, and 9,017.00 ft, crest of spillway. Dead storage, 3,270 acre-ft. Figures given represent usable contents. Reservoir stores water for transmountain diversion to South Platte River basin through Harold D. Roberts tunnel for municipal use by city of Denver. Records provided by Denver Board of Water Commissioners.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 262,200 acre-ft, June 30, 1983, elevation, 9,019.46 ft; minimum since appreciable storage was attained in July 1964, 45,310 acre-ft, Apr. 20, 1965, elevation, 8,904.16 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 258,600 acre-ft, June 17, elevation, 9,018.40 ft; minimum, 225,700 acre-ft, Mar. 27, elevation, 9,007.75.

09057000 GREEN MOUNTAIN RESERVOIR.--Lat 39°52'42", long 106°19'45", in NE¼ sec.15, T.2 S., R.80 W., Summit County, Hydrologic Unit 14010002, in hoist house at right end of dam, 0.6 mi upstream from Elliott Creek, and 13 mi southeast of Kremmling. DRAINAGE AREA, 598 mi^2, includes 15.3 mi^2 of Elliott Creek above diversion for Elliott Creek feeder canal. PERIOD OF RECORD, November 1942 to current year. REVISED RECORDS, WSP 2124: Drainage area. GAGE, Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above National Geodetic Vertical Datum of 1929.

Reservoir is formed by an earth and rockfill dam. Dam completed and storage began November 1942. Capacity, 146,900 acre-ft between elevations 7,800 ft, sill of outlet gate, and 7,950 ft, top of radial spillway gates. Dead storage, 6,860 acre-ft. Figures given represent usable contents. Reservoir is used for power development and storage for replacement of water diverted to South Platte River basin. Water released to fill decrees during late irrigation season when flow of Colorado River is deficient. Records provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 148,900 acre-ft, July 10, 1947, elevation, 7,950.95 ft; minimum since appreciable storage was attained, 388 acre-ft, Jan. 12, 1963, elevation, 7,801.70 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 145,400 acre-ft, July 18, elevation, 7,949.32 ft; minimum, 59,290 acre-ft, Apr. 18, 20, elevation, 7,896.09 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Elevation a(feet)	Contents (acre-feet)	Change in contents (acre-feet)	Elevation a(feet)	Contents (acre-feet)	Change in contents (acre-feet)
	09050600	DILLON RESERVOIR		09057000	GREEN MOUNTAIN	RESERVOIR
Sept. 30........	9,014.16	245,000	-	7,918.16	88,680	-
Oct. 31........	9,013.94	244,300	-700	7,912.24	80,040	-8,640
Nov. 30........	9,013.27	242,200	-2,100	7,908.57	74,970	-5,070
Dec. 31........	9,011.85	237,800	-4,400	7,903.39	68,160	-6,810
CAL YR 1988..	-	-	-3,200	-	-	-14,780
Jan. 31........	9,010.34	233,300	-4,500	7,899.77	63,660	-4,500
Feb. 28........	9,008.61	228,200	-5,100	7,897.48	60,910	-2,750
Mar. 31........	9,007.83	225,900	-2,300	7,897.58	61,030	+120
Apr. 30........	9,008.61	228,200	+2,300	7,901.64	65,960	+4,930
May 31........	9,018.09	257,600	+29,400	7,916.09	85,590	+19,630
June 30........	9,017.23	254,800	-2,800	7,946.66	139,800	+54,210
July 31........	9,016.96	253,900	-900	7,948.95	144,600	+4,800
Aug. 31........	9,015.78	250,100	-3,800	7,940.06	126,600	-18,000
Sept. 30........	9,015.71	249,900	-200	7,919.76	91,120	-35,480
WTR YR 1989..	-	-	+4,900	-	-	+2,440

a-National Geodetic Vertical Datum of 1929

09057500 BLUE RIVER BELOW GREEN MOUNTAIN RESERVOIR, CO

LOCATION.--Lat 39°52'49", long 106°20'00", in SW¼NE¼ sec.15, T.2 S., R.80 W., Summit County, Hydrologic Unit 14010002, on left bank 0.3 mi upstream from Elliott Creek, 0.3 mi downstream from Green Mountain Dam, and 13 mi southeast of Kremmling.

DRAINAGE AREA.--599 mi², includes 15.3 mi² of Elliott Creek above diversion for Elliott Creek feeder canal.

PERIOD OF RECORD.--October 1937 to current year. Prior to October 1943, published as Blue River below Green Mountain Reservoir, near Kremmling. Water-quality data available, January 1986 to September 1987.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,682.66 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to Oct. 1, 1951, water-stage recorder at site 3.7 mi downstream at different datum.

REMARKS.--Estimated daily discharges: Feb. 6-28, and April 27 to May 10. Records good. Flow regulated by Green Mountain Reservoir since November 1942 (station 09057000). Diversions for irrigation of about 5,000 acres upstream from station. Transmountain diversions upstream from station (see elsewhere in this report).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,000 ft³/s, June 4, 1938, gage height, 5.93 ft, site and datum then in use, from rating curve extended above 3,000 ft³/s; maximum gage height, 9.52 ft, July 11, 1983; minimum daily discharge (prior to construction of Green Mountain Reservoir), 80 ft³/s, Feb. 18-24, 1938, Feb. 18-19, 1940; no flow at times in 1943.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 982 ft³/s at 0015 Sept. 5, gage height, 5.93 ft; minimum daily, 99 ft³/s, June 17, 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	393	243	200	208	155	165	165	300	106	105	354	954
2	383	253	199	204	153	163	162	300	106	112	354	952
3	411	307	198	199	158	159	161	290	108	104	354	950
4	433	310	198	199	155	164	164	280	109	112	352	948
5	424	314	192	198	159	164	166	275	109	202	352	958
6	402	208	195	177	160	158	164	270	109	360	393	955
7	394	202	193	178	160	157	223	270	110	395	455	917
8	398	200	192	152	160	153	312	270	110	475	478	850
9	400	198	191	151	160	156	300	270	110	451	581	849
10	397	204	200	155	160	168	295	270	110	450	683	851
11	348	208	202	160	160	175	298	286	110	388	646	797
12	300	197	200	161	160	172	331	250	111	298	590	729
13	296	202	196	152	160	173	305	296	112	189	591	704
14	297	205	200	152	160	177	302	297	116	105	623	684
15	300	204	192	156	160	180	301	278	107	140	680	609
16	298	205	187	152	160	168	303	279	101	260	683	558
17	294	204	194	154	160	166	302	236	99	327	669	619
18	287	208	200	156	160	166	302	273	101	402	672	760
19	290	209	206	153	160	167	304	149	99	423	679	846
20	290	203	203	154	160	164	303	160	170	486	668	816
21	290	195	201	152	160	167	296	162	405	619	666	803
22	213	193	200	143	160	171	295	162	401	602	691	737
23	167	198	196	146	160	171	295	154	402	563	722	701
24	177	196	200	157	160	165	295	127	399	493	756	703
25	216	193	196	157	160	168	301	102	401	408	795	702
26	218	197	207	155	163	163	302	103	403	383	803	712
27	227	203	203	155	166	165	300	105	186	354	802	708
28	232	201	204	156	168	163	300	105	207	356	821	680
29	224	198	200	160	---	162	300	107	210	356	883	631
30	223	199	207	157	---	167	300	108	168	355	882	608
31	246	---	210	162	---	172	---	107	---	359	919	---
TOTAL	9468	6462	6162	5076	4477	5150	8147	6641	5395	10632	19597	23291
MEAN	305	215	199	164	160	166	272	214	180	343	632	776
MAX	433	314	210	208	168	180	331	300	405	619	919	958
MIN	167	193	187	146	153	153	161	102	99	104	352	558
AC-FT	18780	12820	12220	10070	8880	10220	16160	13170	10700	21090	38870	46200

CAL YR 1988 TOTAL 138313 MEAN 378 MAX 1180 MIN 167 AC-FT 274300
WTR YR 1989 TOTAL 110498 MEAN 303 MAX 958 MIN 99 AC-FT 219200

09058000 COLORADO RIVER NEAR KREMMLING, CO

LOCATION.--Lat 40°02'12", long 106°26'22", in NE¼SW¼ sec.23, T.1 N., R.81 W., Grand County, Hydrologic Unit 14010001, on right bank at upstream end of Gore Canyon, 3.0 mi southwest of Kremmling, and 3.8 mi downstream from Blue River.

DRAINAGE AREA.--2,382 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1904 to September 1918 (published as Grand River near Kremmling), October 1961 to September 1970, October 1971 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,320 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1313 for history of changes prior to Oct. 1, 1961.

REMARKS.--Estimated daily discharges: Nov. 27-28, and Nov. 30 to Mar. 9. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, diversions for irrigation of about 40,000 acres upstream from station, and return flow from irrigated areas. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--27 years (water years 1962-70, 1972-89), 1,040 ft³/s; 753,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 21,500 ft³/s, June 7, 1912, gage height, 21.8 ft, datum then in use, from rating curve extended above 14,000 ft³/s; minimum observed, 166 ft³/s, Dec. 19, 1907.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,530 ft³/s at 1500 Apr. 25, gage height, 6.72 ft; minimum daily, 310 ft³/s, Mar. 3-5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	592	488	465	430	335	335	589	969	718	489	769	1100
2	582	498	465	430	335	335	554	959	694	457	802	1100
3	596	505	465	430	335	310	545	1000	701	449	795	1090
4	620	509	440	430	335	310	579	976	701	396	753	1090
5	629	544	415	430	335	310	576	949	687	398	715	1090
6	616	520	430	415	335	330	591	886	606	568	791	1080
7	620	508	430	415	335	350	729	908	525	660	862	1040
8	626	527	430	380	335	370	928	996	560	728	850	997
9	623	553	430	380	335	380	988	1090	602	722	965	1000
10	621	517	430	380	335	391	896	1200	626	728	1120	1010
11	610	495	430	380	335	409	840	1250	620	755	1110	995
12	548	489	430	380	335	428	828	1260	627	689	1050	917
13	548	497	430	380	335	439	814	1220	634	689	1060	930
14	557	510	430	380	335	457	828	1160	615	598	1070	918
15	553	545	430	380	335	481	883	1160	555	520	1100	853
16	544	530	430	380	335	465	953	1100	507	560	1080	768
17	548	514	430	380	335	497	1070	1000	494	623	1080	766
18	547	533	430	380	335	488	1170	1030	602	680	1080	859
19	529	538	430	380	335	519	1260	887	578	804	1070	996
20	481	515	430	380	335	506	1250	939	554	890	1070	1030
21	444	517	430	380	335	484	1290	993	774	976	1070	1060
22	493	515	430	380	335	515	1390	1010	834	1030	1070	1030
23	487	518	430	380	335	573	1410	998	845	1090	1080	958
24	491	537	430	380	335	641	1440	983	856	1100	1090	960
25	499	546	430	360	335	811	1470	957	823	1020	1120	960
26	495	542	430	335	335	868	1460	986	808	978	1140	966
27	491	490	430	335	335	787	1390	875	699	896	1140	973
28	487	500	430	335	335	750	1270	831	589	768	1140	959
29	488	527	430	335	---	801	1140	827	570	842	1110	917
30	486	490	430	335	---	690	1040	782	551	850	1070	835
31	494	---	430	335	---	610	---	752	---	833	1050	---
TOTAL	16945	15517	13430	11810	9380	15640	30171	30933	19555	22786	31281	29247
MEAN	547	517	433	381	335	505	1006	998	652	735	1009	975
MAX	629	553	465	430	335	868	1470	1260	856	1100	1140	1100
MIN	444	488	415	335	335	310	545	752	494	396	715	766
AC-FT	33610	30780	26640	23430	18610	31020	59840	61360	38790	45200	62050	58010

CAL YR 1988 TOTAL 320902 MEAN 877 MAX 3160 MIN 415 AC-FT 636500
WTR YR 1989 TOTAL 246695 MEAN 676 MAX 1470 MIN 310 AC-FT 489300

09058000 COLORADO RIVER NEAR KREMMLING, CO--Continued

PERIOD OF RECORD.--April to September 1989.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
APR												
26...	1200	1430	211	8.2	9.5	8.0	25	40	90	27	5.4	7.9
MAY												
24...	1300	928	240	8.2	13.5	7.6	180	37	95	28	6.1	13
JUN												
21...	1245	756	377	8.4	12.5	5.3	146	120	170	49	11	13
JUL												
19...	1130	808	267	8.2	16.5	7.8	140	84	120	37	6.2	9.9
SEP												
20...	1300	1010	186	8.3	13.5	7.5	K14	27	85	27	4.1	6.6

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
APR												
26...	0.4	1.8	68	34	2.4	0.3	9.1	135	130	0.18	521	<0.01
MAY												
24...	0.6	2.5	70	41	2.1	0.2	10	156	145	0.21	391	<0.01
JUN												
21...	0.5	2.2	107	80	3.0	0.4	11	252	234	0.34	514	<0.01
JUL												
19...	0.4	2.1	84	39	2.9	0.3	10	160	158	0.22	349	<0.01
SEP												
20...	0.3	1.6	62	31	2.7	0.4	6.8	120	118	0.16	327	<0.01

DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	PHOS- PHOROUS TOTAL (MG/L AS P)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P)	PHOS- PHOROUS ORGANIC TOTAL (MG/L AS P)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHOROUS ORGANIC DIS- SOLVED (MG/L AS P)
APR												
26...	0.9	0.16	0.03	0.04	0.05	0.87	0.06	0.15	0.02	0.15	0.02	0.0
MAY												
24...	0.5	<0.10	0.02	0.01	0.01	0.48	0.06	0.04	0.03	0.04	0.02	0.01
JUN												
21...	0.4	<0.10	0.03	<0.01	--	0.37	--	0.03	0.02	0.03	<0.01	0.02
JUL												
19...	1.4	<0.10	<0.01	0.01	0.01	--	--	0.05	0.01	0.05	<0.01	0.01
SEP												
20...	0.2	0.11	<0.01	<0.01	--	--	0.03	0.02	0.02	0.02	0.01	0.01

DATE	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
APR								
26...	33	<0.5	<1	<5	<3	<10	56	<10
MAY								
24...	31	<0.5	<1	<5	<3	<10	69	10
JUN								
21...	49	<0.5	<1	<5	<3	<10	69	<10
JUL								
19...	39	<0.5	<1	<5	<3	<10	47	<10
SEP								
20...	40	<0.5	<1	<5	<3	<10	12	<10

K BASED ON NON-IDEAL COLONY COUNT.

09058000 COLORADO RIVER NEAR KREMMLING, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	LITHIUM DIS-SOLVED (UG/L AS LI)
APR								
26...	23	20	20	1.0	190	<6	<3	7
MAY								
24...	16	10	<10	1.0	210	<6	8	11
JUN								
21...	67	30	<10	1.0	350	<6	8	15
JUL								
19...	60	40	<10	<1.0	220	<6	8	12
SEP								
20...	22	40	<10	<1.0	150	<6	11	7

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					NOV 1988				
18...	1500	543	215	13.0	22...	1400	517	252	0.0

09058030 COLORADO RIVER NEAR RADIUM, COLORADO

LOCATION.--Lat 39°58'01", long 106°31'22", in NW¼NW¼ sec.24, T.1 S., R.82 W., Grand County, Hydrologic Unit 14010001, on left bank, 1.0 mi upstream from Blacktail Creek, 2.0 mi northeast of Radium, and 3.0 mi downstream from Canyon Creek.

DRAINAGE AREA.--2,412 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1981 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,910 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 27-28, and Nov. 30 to Apr. 26. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, diversions for irrigation of about 40,000 acres upstream from station, and return flow from irrigated areas.

AVERAGE DISCHARGE.--8 years, 1,315 ft^3/s; 952,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,800 ft^3/s, probably occurred on May 26, 1984, gage height, 12.91 ft, from highwater mark in well; minimum daily, 310 ft^3/s, Mar. 3-5, 1989.

EXTREMES FOR CURRENT PERIOD.--Maximum discharge, not determined; minimum daily, 310 ft^3/s, Mar. 3-5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	655	484	465	430	335	335	589	919	705	487	772	1100
2	635	484	465	430	335	335	554	909	678	464	798	1100
3	638	507	465	430	335	310	545	950	685	461	788	1090
4	673	497	440	430	335	310	579	933	685	421	755	1090
5	685	543	415	430	335	310	576	906	682	391	713	1090
6	672	516	430	415	335	330	591	850	589	531	778	1080
7	675	526	430	415	335	350	729	865	500	662	849	1050
8	682	510	430	380	335	370	928	950	523	725	849	989
9	678	543	430	380	335	380	988	1050	572	725	936	997
10	675	510	430	380	335	391	896	1150	609	725	1100	1000
11	658	467	430	380	335	409	840	1190	594	762	1100	994
12	589	464	430	380	335	428	828	1200	605	692	1050	909
13	581	464	430	380	335	439	814	1180	609	692	1060	920
14	589	487	430	380	335	457	828	1130	599	592	1060	913
15	586	539	430	380	335	481	883	1130	530	507	1090	853
16	572	516	430	380	335	465	953	1080	497	523	1080	763
17	572	500	430	380	335	497	1070	982	477	609	1080	756
18	569	520	430	380	335	483	1170	974	576	662	1080	842
19	563	526	430	380	335	519	1260	869	563	791	1070	987
20	490	487	430	380	335	506	1250	901	530	872	1070	1020
21	454	487	430	380	335	484	1290	953	744	946	1070	1060
22	495	494	430	380	335	515	1390	995	822	1020	1060	1030
23	494	500	430	380	335	573	1410	957	835	1080	1080	946
24	494	520	430	380	335	641	1440	952	849	1090	1080	950
25	503	536	430	360	335	811	1470	929	815	1020	1110	949
26	500	530	430	335	335	868	1450	953	805	966	1130	953
27	487	490	430	335	335	787	1330	855	705	886	1130	962
28	484	500	430	335	335	750	1220	815	569	778	1130	949
29	477	526	430	335	---	801	1100	812	556	832	1100	909
30	477	490	430	335	---	690	1000	772	536	842	1070	827
31	487	---	430	335	---	610	---	738	---	829	1040	---
TOTAL	17789	15163	13430	11810	9380	15640	29971	29849	19044	22583	31078	29078
MEAN	574	505	433	381	335	505	999	963	635	728	1003	969
MAX	685	543	465	430	335	868	1470	1200	849	1090	1130	1100
MIN	454	464	415	335	335	310	545	738	477	391	713	756
AC-FT	35280	30080	26640	23430	18610	31020	59450	59210	37770	44790	61640	57680

CAL YR 1988 TOTAL 334363 MEAN 914 MAX 3220 MIN 415 AC-FT 663200
WTR YR 1989 TOTAL 244815 MEAN 671 MAX 1470 MIN 310 AC-FT 485600

09058030 COLORADO RIVER NEAR RADIUM, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1981 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT												
26...	1030	500	230	8.6	6.0	10.5	K9	--	--	--	26	--
APR												
26...	0930	1370	200	8.1	8.5	9.5	31	61	87	26	--	5.3
MAY												
24...	1000	--	220	8.3	15.0	9.1	180	36	110	32	--	6.7
JUN												
21...	0915	755	450	8.4	12.5	8.6	260	200	200	57	--	14
JUL												
19...	0845	796	275	8.3	15.0	7.9	410	170	130	39	--	6.7
SEP												
20...	1000	1020	196	8.5	12.0	8.3	27	41	88	28	--	4.3

DATE	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM, TOTAL RECOV-ERABLE (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	POTAS-SIUM, TOTAL RECOV-ERABLE (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT											
26...	5.3	--	9.7	--	--	1.6	74	<0.5	41	2.8	--
APR											
26...	--	8.0	--	0.4	1.7	--	67	--	33	2.3	0.20
MAY											
24...	--	8.8	--	0.4	1.7	--	71	--	46	1.9	0.30
JUN											
21...	--	17	--	0.5	2.4	--	123	--	97	2.9	0.40
JUL											
19...	--	10	--	0.4	2.1	--	89	--	44	3.0	0.30
SEP											
20...	--	7.1	--	0.3	1.6	--	63	--	32	2.9	0.40

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
OCT											
26...	--	151	--	--	--	--	<0.01	0.30	--	<0.10	--
APR											
26...	8.6	135	126	0.18	499	<0.01	--	0.90	0.17	--	0.04
MAY											
24...	10	164	150	0.22	0.0	<0.01	--	0.90	<0.10	--	0.04
JUN											
21...	13	270	278	0.37	550	<0.01	--	0.40	<0.10	--	0.03
JUL											
19...	9.0	167	168	0.23	359	<0.01	--	1.3	<0.10	--	<0.01
SEP											
20...	7.3	136	122	0.18	0.0	<0.01	--	0.30	0.16	--	0.01

K BASED ON NON-IDEAL COLONY COUNT.

09058030 COLORADO RIVER NEAR RADIUM, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORGANIC TOTAL (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHOROUS ORGANIC DIS-SOLVED (MG/L AS P)	CYANIDE TOTAL (MG/L AS CN)
OCT 26...	--	--	--	--	0.02	--	0.02	--	<0.01	--	<0.01
APR 26...	0.03	0.04	0.86	0.06	0.18	0.02	0.18	0.02	--	0.0	--
MAY 24...	0.02	0.03	0.86	0.09	0.03	0.02	0.03	0.03	--	0.0	--
JUN 21...	<0.01	--	0.37	--	0.03	0.02	0.03	<0.01	--	0.02	--
JUL 19...	<0.01	--	--	--	0.06	<0.01	0.06	<0.01	--	--	--
SEP 20...	<0.01	--	0.29	0.09	0.03	0.07	0.03	0.03	--	0.04	--

DATE	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)
OCT 26...	2	--	--	40	--	<1	--	<1	--
APR 26...	--	28	<0.5	--	<1	--	<5	--	<3
MAY 24...	--	38	<0.5	--	<1	--	<5	--	<3
JUN 21...	--	54	<0.5	--	<1	--	<5	--	<3
JUL 19...	--	37	<0.5	--	<1	--	<5	--	<3
SEP 20...	--	38	<0.5	--	<1	--	<5	--	<3

DATE	COPPER, DIS-SOLVED (UG/L AS CU)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)
OCT 26...	--	2	240	40	--	<5	10	30	--
APR 26...	10	--	--	53	<10	--	16	--	20
MAY 24...	<10	--	--	65	10	--	31	--	<10
JUN 21...	<10	--	--	68	<10	--	58	--	20
JUL 19...	<10	--	--	47	<10	--	29	--	30
SEP 20...	<10	--	--	22	<10	--	14	--	40

DATE	NICKEL, DIS-SOLVED (UG/L AS NI)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	LITHIUM DIS-SOLVED (UG/L AS LI)
OCT 26...	--	4	<1	--	1	--	--	--	--
APR 26...	10	--	--	<1.0	--	170	<6	3	6
MAY 24...	<10	--	--	1.0	--	230	<6	6	11
JUN 21...	<10	--	--	2.0	--	430	<6	23	19
JUL 19...	<10	--	--	<1.0	--	200	<6	<3	8
SEP 20...	<10	--	--	<1.0	--	150	<6	10	8

09058500 PINEY RIVER BELOW PINEY LAKE, NEAR MINTURN, CO

LOCATION.--Lat 39°42'29", long 106°25'34", Eagle County, Hydrologic Unit 14010001, on left bank 1.4 mi upstream from Dickson Creek, 2.0 mi downstream from Piney Lake, and 8.5 mi north of Minturn.

DRAINAGE AREA.--13.0 mi^2.

PERIOD OF RECORD.--October 1947 to September 1954, October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 9,145.25 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to October 1963, water-stage recorder at site 15 ft upstream at present datum.

REMARKS.--Estimated daily discharges: Oct. 30 to Apr. 26. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--33 years (1948-54, 1964-89), 24.8 ft^3/s; 17,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 560 ft^3/s, June 8, 1985, gage height, 5.12 ft; maximum gage height observed, 6.44 ft, Apr. 13, 1977; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 23	0300	168	4.24	June 17	0200	175	4.25
May 29	0400	*178	*4.27				

Minimum daily discharge, 1.0 ft^3/s, Feb. 1-14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	2.6	1.6	1.4	1.0	1.2	6.4	14	91	46	22	3.8
2	2.1	2.6	1.6	1.4	1.0	1.2	6.0	14	88	42	48	3.6
3	2.0	2.4	1.6	1.4	1.0	1.2	5.6	13	79	38	43	3.3
4	1.9	2.4	1.6	1.4	1.0	1.3	5.6	12	63	36	29	3.2
5	2.2	2.4	1.6	1.4	1.0	1.3	6.0	12	61	35	23	3.1
6	2.5	2.2	1.6	1.4	1.0	1.3	6.6	19	73	33	18	3.1
7	2.7	2.2	1.6	1.4	1.0	1.4	7.6	39	63	31	15	2.9
8	2.6	2.2	1.6	1.4	1.0	1.5	9.0	61	74	27	13	3.1
9	2.4	2.2	1.6	1.4	1.0	1.7	10	82	63	23	12	3.6
10	2.4	2.2	1.6	1.4	1.0	2.0	9.0	101	57	22	11	4.0
11	2.4	2.0	1.6	1.4	1.0	2.6	8.0	91	59	25	11	3.9
12	2.4	2.0	1.6	1.4	1.0	3.4	7.0	73	74	32	11	4.2
13	2.3	2.0	1.6	1.4	1.0	3.8	7.0	52	68	41	11	4.9
14	2.2	2.0	1.6	1.4	1.0	3.8	7.6	43	64	27	10	5.0
15	2.1	2.0	1.6	1.4	1.1	3.8	9.0	34	80	22	8.8	4.7
16	2.1	1.8	1.4	1.4	1.1	3.6	11	29	108	18	7.7	4.3
17	2.0	1.8	1.4	1.4	1.1	3.6	13	26	127	16	7.1	3.9
18	1.9	1.8	1.4	1.4	1.1	3.6	17	32	89	14	7.4	3.5
19	1.9	1.8	1.4	1.4	1.1	3.4	21	70	100	14	7.9	3.3
20	1.9	1.8	1.4	1.4	1.2	3.4	27	89	90	13	8.6	3.4
21	1.9	1.8	1.4	1.3	1.2	3.4	35	118	76	12	9.1	3.5
22	1.9	1.8	1.4	1.3	1.2	3.4	47	92	44	12	7.9	3.4
23	1.9	1.8	1.4	1.3	1.2	3.6	64	136	35	13	6.8	3.2
24	1.9	1.8	1.4	1.3	1.2	3.6	64	121	30	18	6.0	3.0
25	1.7	1.8	1.4	1.2	1.2	3.8	60	97	41	23	5.7	2.9
26	1.7	1.6	1.4	1.2	1.2	4.0	56	55	42	58	5.3	2.8
27	1.7	1.6	1.4	1.2	1.2	4.4	42	58	41	26	4.9	2.6
28	1.7	1.6	1.4	1.2	1.2	4.8	29	98	45	28	4.6	2.5
29	1.7	1.6	1.4	1.2	---	5.6	21	139	46	62	4.3	2.6
30	1.7	1.6	1.4	1.2	---	6.6	16	132	46	42	4.1	2.4
31	1.8	---	1.4	1.2	---	7.0	---	109	---	28	3.9	---
TOTAL	63.7	59.4	46.4	41.6	30.3	99.3	633.4	2061	2017	877	387.1	103.7
MEAN	2.05	1.98	1.50	1.34	1.08	3.20	21.1	66.5	67.2	28.3	12.5	3.46
MAX	2.7	2.6	1.6	1.4	1.2	7.0	64	139	127	62	48	5.0
MIN	1.7	1.6	1.4	1.2	1.0	1.2	5.6	12	30	12	3.9	2.4
AC-FT	126	118	92	83	60	197	1260	4090	4000	1740	768	206

CAL YR 1988 TOTAL 7687.4 MEAN 21.0 MAX 250 MIN 1.4 AC-FT 15250
WTR YR 1989 TOTAL 6419.9 MEAN 17.6 MAX 139 MIN 1.0 AC-FT 12730

09058610 DICKSON CREEK NEAR VAIL, CO

LOCATION.--Lat 39°42'14", long 106°27'25", Eagle County, Hydrologic Unit 14010001, on right bank 0.6 mi upstream from Freeman Creek, 1.0 mi upstream from mouth, and 6 mi northwest of Vail.

DRAINAGE AREA.--3.41 mi².

PERIOD OF RECORD.--October 1971 to current year. Prior to October 1972, published as "near Minturn."

GAGE.--Water-stage recorder. Elevation of gage is 9,245 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 23 to Jan. 7, Feb. 2 to Mar. 4, Apr. 3-4, and Sept. 25-30. Records good except for estimated daily discharges, which are poor. Diversion by Willy N. ditch 75 ft upstream for irrigation of hay meadows downstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--18 years, 2.15 ft³/s; 1,560 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48 ft³/s, May 6, 1979, gage height, 2.75 ft; maximum gage height, 4.89 ft, May 9, 1984 (backwater from ice); no flow at times some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5.6 ft³/s at 1900 May 9, gage height, 2.46 ft; maximum gage height, 2.47 ft, at 2200 May 22; minimum daily discharge, 0.17 ft³/s, Aug. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.61	.55	.60	.52	.35	.30	.50	1.2	3.0	1.2	.66	.49
2	.59	.57	.60	.52	.32	.30	.45	1.3	2.9	1.2	1.0	.50
3	.60	.57	.60	.52	.30	.32	.45	1.5	2.9	1.2	.64	.52
4	.65	.57	.60	.52	.30	.32	.45	1.4	3.3	1.1	.56	.57
5	.97	.57	.60	.51	.28	.32	.45	1.4	4.3	1.0	.51	.57
6	.64	.61	.60	.51	.28	.35	.53	2.1	4.4	.88	.45	.56
7	.40	.63	.60	.51	.28	.35	.83	2.6	4.5	.90	.41	.45
8	.41	.54	.60	.51	.26	.53	.93	3.4	2.3	1.0	.37	.65
9	.37	.57	.60	.51	.26	.63	.89	4.1	2.2	.96	.34	.78
10	.42	.57	.60	.51	.26	.59	.68	3.9	2.0	.82	.33	.72
11	.45	.57	.60	.51	.26	.57	.72	3.8	2.1	.92	.41	.72
12	.42	.55	.60	.51	.26	.57	.63	3.7	2.1	1.1	.29	.81
13	.46	.64	.60	.51	.24	.57	.59	3.2	2.0	1.0	.25	.89
14	.47	.60	.60	.51	.24	.52	.68	3.0	1.7	.80	.20	.81
15	.56	.57	.60	.50	.24	.42	.85	2.7	1.8	.80	.17	.71
16	.64	.48	.58	.45	.24	.45	1.1	2.4	1.7	.60	.27	.62
17	.61	.57	.58	.45	.24	.45	1.3	2.3	1.8	.45	.39	.49
18	.64	.57	.58	.45	.24	.36	1.6	2.5	1.7	.45	.41	.44
19	.73	.53	.58	.45	.24	.35	1.8	3.3	1.6	.45	.36	.52
20	.54	.51	.58	.44	.24	.37	2.1	3.6	1.6	.45	.69	.53
21	.57	.51	.56	.40	.24	.45	2.7	3.8	1.6	.45	.76	.57
22	.57	.51	.56	.40	.24	.45	2.6	3.7	1.7	.45	.71	.55
23	.57	.50	.56	.40	.26	.45	2.7	4.1	1.7	.47	.49	.52
24	.57	.50	.56	.40	.26	.43	2.9	3.9	1.6	.71	.51	.49
25	.63	.50	.56	.40	.28	.43	2.8	3.5	1.5	.73	.51	.47
26	.64	.52	.54	.34	.30	.51	2.6	3.3	1.4	.77	.51	.46
27	.64	.52	.54	.35	.30	.51	2.3	2.9	1.4	.72	.51	.44
28	.58	.54	.54	.35	.30	.51	1.7	2.9	1.2	.69	.51	.42
29	.57	.56	.54	.35	---	.52	1.5	2.9	1.2	.64	.51	.41
30	.57	.58	.52	.35	---	.38	1.4	3.2	1.2	.64	.54	.40
31	.60	---	.52	.35	---	.44	---	3.2	---	.57	.55	---
TOTAL	17.69	16.58	17.90	14.01	7.51	13.72	40.73	90.8	64.4	24.12	14.82	17.08
MEAN	.57	.55	.58	.45	.27	.44	1.36	2.93	2.15	.78	.48	.57
MAX	.97	.64	.60	.52	.35	.63	2.9	4.1	4.5	1.2	1.0	.89
MIN	.37	.48	.52	.34	.24	.30	.45	1.2	1.2	.45	.17	.40
AC-FT	35	33	36	28	15	27	81	180	128	48	29	34

CAL YR 1988 TOTAL 433.20 MEAN 1.18 MAX 5.2 MIN .37 AC-FT 859
WTR YR 1989 TOTAL 339.36 MEAN .93 MAX 4.5 MIN .17 AC-FT 673

09058700 FREEMAN CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°41'54", long 106°26'42", Eagle County, Hydrologic Unit 14010001, on right bank 0.8 mi upstream from mouth and 7.5 mi north of Minturn.

DRAINAGE AREA.--2.94 mi².

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,335 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 30 to Apr. 24. Records fair except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--25 years, 1.36 ft³/s; 985 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 82 ft³/s, May 25, 1984, gage height, 2.21 ft, maximum gage height, 3.51 ft, May 18, 1973 (backwater from ice); no flow for some days some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 25 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 9	1600	*23	*1.90				

Minimum daily, 0.06 ft³/s, Jan. 11 to Mar. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.24	.08	.07	.06	.06	.50	2.5	2.2	.43	.26	.11
2	.12	.22	.08	.07	.06	.06	.44	2.4	2.1	.40	.53	.10
3	.12	.22	.08	.07	.06	.06	.40	2.3	2.1	.38	.28	.11
4	.12	.20	.08	.07	.06	.06	.40	2.3	2.0	.36	.25	.11
5	.14	.18	.08	.07	.06	.07	.40	2.2	1.9	.32	.20	.13
6	.13	.18	.08	.07	.06	.07	.44	3.0	1.8	.28	.16	.14
7	.13	.16	.08	.07	.06	.08	.48	4.1	1.8	.28	.13	.13
8	.13	.16	.08	.07	.06	.09	.56	7.2	1.8	.34	.12	.28
9	.13	.16	.08	.07	.06	.12	.60	11	1.7	.33	.12	.25
10	.12	.14	.08	.07	.06	.14	.54	13	1.8	.28	.15	.20
11	.12	.14	.08	.06	.06	.18	.50	11	1.8	.30	.18	.20
12	.12	.14	.08	.06	.06	.22	.50	7.4	1.8	.46	.22	.33
13	.12	.14	.08	.06	.06	.28	.54	4.7	1.6	.42	.18	.40
14	.13	.12	.08	.06	.06	.30	.62	3.7	1.3	.31	.15	.28
15	.13	.12	.08	.06	.06	.30	.70	3.3	1.2	.29	.13	.25
16	.13	.12	.07	.06	.06	.28	.80	3.3	1.0	.24	.15	.23
17	.13	.12	.07	.06	.06	.28	1.0	3.4	1.1	.21	.15	.22
18	.13	.12	.07	.06	.06	.26	1.2	4.8	.95	.20	.17	.22
19	.14	.12	.07	.06	.06	.26	1.6	5.7	.86	.16	.18	.20
20	.14	.10	.07	.06	.06	.26	2.2	5.7	.79	.17	.28	.30
21	.15	.10	.07	.06	.06	.26	3.0	5.9	.80	.15	.24	.29
22	.15	.10	.07	.06	.06	.26	3.8	5.2	.80	.15	.12	.26
23	.14	.10	.07	.06	.06	.28	4.0	5.1	.80	.20	.16	.23
24	.15	.10	.07	.06	.06	.28	3.6	4.7	.75	.33	.09	.21
25	.15	.09	.07	.06	.06	.28	3.0	3.9	.69	.32	.12	.18
26	.16	.09	.07	.06	.06	.30	3.1	3.2	.62	.36	.11	.18
27	.16	.09	.07	.06	.06	.30	2.7	2.8	.57	.25	.11	.19
28	.16	.09	.07	.06	.06	.32	2.5	2.6	.52	.23	.11	.21
29	.17	.09	.07	.06	---	.36	2.5	2.6	.46	.25	.11	.21
30	.20	.09	.07	.06	---	.40	2.5	2.6	.45	.22	.11	.21
31	.22	---	.07	.06	---	.48	---	2.4	---	.19	.11	---
TOTAL	4.36	4.04	2.32	1.96	1.68	6.95	45.12	144.0	38.06	8.81	5.38	6.36
MEAN	.14	.13	.075	.063	.060	.22	1.50	4.65	1.27	.28	.17	.21
MAX	.22	.24	.08	.07	.06	.48	4.0	13	2.2	.46	.53	.40
MIN	.12	.09	.07	.06	.06	.06	.40	2.2	.45	.15	.09	.10
AC-FT	8.6	8.0	4.6	3.9	3.3	14	89	286	75	17	11	13

CAL YR 1988 TOTAL 319.29 MEAN .87 MAX 16 MIN .05 AC-FT 633
WTR YR 1989 TOTAL 269.04 MEAN .74 MAX 13 MIN .06 AC-FT 534

09058800 EAST MEADOW CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°43'54", long 106°25'34", Eagle County, Hydrologic Unit 14010001, on left bank 1.4 mi upstream from mouth and 10 mi north of Minturn.

DRAINAGE AREA.--3.61 mi^2.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,455 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 8 to Apr. 26. Records good except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--25 years, 4.41 ft^3/s; 3,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81 ft^3/s, June 30, 1984, gage height, 1.71 ft, but may have been higher during period of no gage height record May 11 to June 26, 1984; maximum gage height, 2.22 ft, May 12, 1970 (backwater from ice); minimum daily discharge, 0.32 ft^3/s, Jan. 7, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 25 ft^3/s at 1800 May 24, gage height, 1.37 ft; minimum daily, 0.38 ft^3/s, Feb. 5, 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.88	.94	.58	.66	.66	.62	.78	2.8	18	3.4	2.2	1.0
2	.80	.90	.56	.60	.64	.44	.68	2.5	17	3.2	5.3	1.0
3	.80	.78	.58	.64	.62	.44	.70	2.3	16	3.1	3.4	.96
4	.79	.71	.56	.62	.54	.42	.64	2.1	14	2.9	2.7	.97
5	.97	.91	.60	.68	.38	.40	.62	2.4	13	2.8	2.3	1.0
6	.97	.83	.60	.64	.38	.46	.66	3.5	13	2.6	2.0	.98
7	.90	.60	.64	.54	.40	.46	.78	4.7	12	2.5	2.0	.95
8	.91	.58	.62	.52	.40	.48	.92	7.0	13	2.5	1.9	1.2
9	.88	.58	.58	.52	.64	.48	.96	9.5	12	2.3	1.9	1.2
10	.90	.58	.56	.68	.74	.52	.88	12	11	2.2	2.0	1.2
11	.87	.56	.56	.68	.74	.54	.90	13	11	2.2	1.8	1.2
12	.86	.56	.56	.52	.68	.56	.80	11	13	3.1	1.9	1.3
13	.88	.56	.56	.44	.66	.56	.78	9.1	12	2.8	2.0	1.5
14	.85	.54	.56	.52	.60	.56	.88	7.6	11	2.2	1.7	1.4
15	.86	.54	.66	.66	.58	.52	.96	6.2	10	2.1	1.6	1.2
16	.82	.54	.76	.58	.52	.54	1.6	5.8	11	1.8	1.5	1.1
17	.79	.58	.76	.60	.66	.58	2.1	5.1	11	1.7	1.5	1.1
18	.80	.52	.56	.60	.68	.54	2.6	7.6	10	1.6	1.5	1.1
19	.79	.50	.54	.62	.66	.56	3.1	12	9.5	1.5	1.5	1.0
20	.81	.56	.56	.60	.66	.56	3.5	14	9.1	1.5	1.6	1.2
21	.79	.54	.52	.62	.62	.54	4.0	15	7.9	1.4	1.4	1.3
22	.73	.60	.54	.62	.58	.56	4.4	16	6.7	1.4	1.3	1.1
23	.73	.62	.54	.66	.66	.58	4.9	19	5.9	2.1	1.3	1.1
24	.73	.60	.56	.66	.80	.58	5.3	20	5.2	3.0	1.2	1.0
25	.73	.58	.52	.66	.96	.62	5.1	18	4.6	3.5	1.2	.97
26	.67	.56	.52	.54	.98	.68	5.1	15	4.3	3.4	1.1	.92
27	.67	.60	.60	.54	.94	.70	4.9	17	4.1	2.4	1.1	.92
28	.67	.60	.54	.64	.82	.70	3.9	19	3.8	2.5	1.0	.95
29	.73	.58	.60	.64	---	.76	3.1	21	3.6	3.3	1.0	.91
30	.80	.58	.70	.58	---	.68	3.0	21	3.5	2.8	1.0	.94
31	.80	---	.68	.64	---	.64	---	19	---	2.3	1.0	---
TOTAL	25.18	18.73	18.28	18.72	18.20	17.28	68.54	340.2	296.2	76.1	54.9	32.67
MEAN	.81	.62	.59	.60	.65	.56	2.28	11.0	9.87	2.45	1.77	1.09
MAX	.97	.94	.76	.68	.98	.76	5.3	21	18	3.5	5.3	1.5
MIN	.67	.50	.52	.44	.38	.40	.62	2.1	3.5	1.4	1.0	.91
AC-FT	50	37	36	37	36	34	136	675	588	151	109	65

CAL YR 1988 TOTAL 1044.55 MEAN 2.85 MAX 23 MIN .50 AC-FT 2070
WTR YR 1989 TOTAL 985.00 MEAN 2.70 MAX 21 MIN .38 AC-FT 1950

09059500 PINEY RIVER NEAR STATE BRIDGE, CO

LOCATION.--Lat 39°48'00", long 106°35'00", in SW¼NE¼ sec.16, T.3 S., R.82 W., Eagle County, Hydrologic Unit 14010001, on left bank at downstream side of private bridge at Perry Olsen Ranch 1.2 mi downstream from Rock Creek, and 6.0 mi southeast of State Bridge.

DRAINAGE AREA.--86.2 mi².

PERIOD OF RECORD.--May 1944 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,272.35 ft above National Geodetic Vertical Datum of 1929. Prior to July 29, 1944, nonrecording gage, and July 29, 1944, to Oct. 24, 1947, water-stage recorder, at datum 2.38 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 16-18, 20-23, Nov. 25 to Dec. 25, Dec. 27 to Feb. 13, Feb. 23-25, Mar. 5, 6, and 15. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 400 acres of hay meadows upstream and downstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--45 years, 76.1 ft³/s; 55,130 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,300 ft³/s, May 25, 1984 (occurred during a period of no gage-height record); maximum recorded discharge, 1,220 ft³/s, June 27, 1983, gage height, 5.82 ft, (from peak stage indicator), but may have been higher May 25, 1984; minimum daily, 1.9 ft³/s, Sept. 1, 18, 19, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 520 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 24	0215	*432	*4.72				

Minimum daily, 8.7 ft³/s, Feb. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	10	13	12	10	9.4	19	62	261	64	31	11
2	12	11	12	12	10	9.8	18	65	247	60	54	11
3	12	11	12	12	9.2	10	17	65	229	55	51	10
4	12	11	12	11	9.0	9.7	19	64	200	53	27	9.8
5	13	11	12	11	9.0	9.6	16	63	185	50	22	9.9
6	15	11	13	12	9.2	10	17	85	196	47	28	9.8
7	15	13	13	11	9.8	11	23	132	178	44	25	9.4
8	15	12	11	11	11	12	29	187	187	42	22	10
9	14	13	11	11	11	16	30	243	177	39	[illegible]	13
10	14	13	13	12	12	17	26	276	165	36	22	12
11	14	14	13	12	11	17	23	282	167	36	21	12
12	14	12	12	11	11	18	21	256	185	40	21	13
13	14	14	13	12	11	18	21	197	178	51	22	16
14	14	13	13	12	11	17	25	173	161	40	20	15
15	13	13	13	11	11	21	29	150	165	36	18	14
16	13	13	12	12	10	15	37	141	187	31	17	13
17	13	13	11	12	10	15	47	132	212	27	17	12
18	13	14	11	12	10	14	62	151	169	25	17	12
19	12	14	12	12	10	15	75	233	173	23	17	11
20	12	13	13	12	10	17	99	280	163	22	18	12
21	12	12	13	12	10	18	133	319	135	23	19	14
22	12	13	13	12	10	15	144	309	110	21	17	13
23	12	13	12	12	10	15	152	362	99	21	15	12
24	11	13	12	11	10	17	167	361	82	26	15	11
25	11	14	13	11	10	19	165	310	80	28	14	11
26	11	13	13	11	10	21	150	238	78	58	13	11
27	11	12	11	10	10	19	131	233	72	37	12	11
28	11	12	10	10	8.7	20	99	283	71	33	12	11
29	11	13	11	11	---	22	80	324	70	55	12	11
30	11	13	11	11	---	18	69	325	66	47	11	11
31	11	---	12	10	---	22	---	291	---	36	11	---
TOTAL	390	377	376	354	283.9	487.5	1943	6592	4648	1206	663	351.8
MEAN	12.6	12.6	12.1	11.4	10.1	15.7	64.8	213	155	38.9	21.4	11.7
MAX	15	14	13	12	12	22	167	362	261	64	54	16
MIN	11	10	10	10	8.7	9.4	16	62	66	21	11	9.4
AC-FT	774	748	746	702	563	967	3850	13080	9220	2390	1320	698

CAL YR 1988 TOTAL 20021.1 MEAN 54.7 MAX 424 MIN 9.0 AC-FT 39710
WTR YR 1989 TOTAL 17672.2 MEAN 48.4 MAX 362 MIN 8.7 AC-FT 35050

09060550 ROCK CREEK AT CRATER, CO

LOCATION.--Lat 39°58'42", long 106°42'34", in NW¼NE¼ sec. 17, T.1 S., R.83 W., Routt County, Hydrologic Unit 14010001, on right bank 250 ft downstream from county bridge crossing, 2 miles downstream from Kayser Mutual Ditch diversion and 0.8 miles northwest of Crater, Colorado.

DRAINAGE AREA.--72.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,185 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Diversions for irrigation of approximately 1,025 acres upstream from station. Several observations of specific conductance and water temperature where obtained and published elsewhere in this report.

AVERAGE DISCHARGE. --5 years, 35.8 ft³/s; 25,940 acre-ft/year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 422 ft³/s, May 6, 1985, gage height, 3.97 ft, but may have been higher during period of no gage-height record May 7-14, 1985; minimum daily, 3.5 ft³/s, Aug. 7, 8, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 259 ft³/s at 2200 Apr. 23, gage height, 3.48 ft; minimum daily, 3.9 ft³/s, Sept. 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	5.3	11	9.4	8.8	10	21	91	77	8.9	10	4.7
2	4.5	5.4	10	9.3	7.8	10	20	93	70	7.1	11	4.6
3	4.3	5.7	9.9	9.3	8.0	9.8	17	89	64	6.9	20	4.6
4	4.4	7.3	9.9	9.3	8.2	9.4	18	84	61	6.6	11	4.6
5	4.9	6.1	9.6	9.3	8.3	9.4	18	79	61	6.3	9.5	4.5
6	5.5	5.7	9.4	9.7	9.1	9.6	21	87	55	6.3	8.3	5.0
7	5.4	9.7	9.5	9.6	9.1	9.7	28	105	46	6.2	7.3	6.5
8	5.4	14	9.6	9.6	9.3	10	37	119	44	6.1	6.7	6.7
9	5.4	13	9.4	9.6	9.7	12	44	146	44	6.0	6.3	8.4
10	5.7	11	9.9	9.4	9.6	13	37	153	49	6.0	6.8	8.2
11	6.2	13	10	9.3	9.6	14	41	163	62	5.9	7.5	5.9
12	5.6	11	9.9	9.4	9.6	15	35	166	43	6.2	7.3	3.9
13	5.2	13	9.9	9.3	9.6	17	38	141	44	7.1	7.9	5.4
14	5.1	12	9.9	9.5	9.6	18	50	139	35	14	7.8	5.7
15	5.1	11	9.9	9.6	9.3	20	72	129	30	7.7	8.5	5.4
16	5.2	9.4	9.9	9.6	9.3	20	83	111	26	6.7	8.1	5.0
17	5.2	11	9.9	9.3	9.3	19	104	103	27	5.9	7.0	4.9
18	5.2	11	9.8	9.3	9.3	18	136	109	25	5.5	6.9	4.9
19	5.2	9.6	9.9	9.3	9.3	17	142	129	21	5.4	6.9	4.9
20	5.2	9.4	9.9	9.3	9.3	16	159	131	18	5.2	8.6	5.1
21	5.3	9.3	9.9	9.3	9.3	14	188	144	16	5.2	7.7	6.5
22	5.4	10	9.5	9.3	9.3	14	198	143	16	5.2	6.6	5.6
23	5.2	11	9.2	9.3	9.3	15	199	155	16	5.3	6.2	5.1
24	5.2	11	9.8	9.3	9.5	16	203	153	16	10	5.7	4.9
25	5.1	11	10	9.3	10	18	192	135	14	9.3	5.3	4.8
26	5.2	11	9.7	9.3	10	21	185	111	12	8.9	5.1	4.8
27	5.2	10	9.6	9.0	10	22	167	109	12	7.2	5.1	4.7
28	5.2	11	9.6	9.2	10	22	126	107	10	10	5.1	4.6
29	5.1	10	9.9	9.1	---	26	111	100	9.4	23	5.0	4.6
30	5.4	10	10	9.0	---	22	103	95	9.4	62	4.9	4.6
31	5.5	---	9.9	8.9	---	20	---	85	---	18	4.8	---
TOTAL	161.0	297.9	304.3	289.4	259.5	486.9	2793	3704	1032.8	300.1	234.9	159.1
MEAN	5.19	9.93	9.82	9.34	9.27	15.7	93.1	119	34.4	9.68	7.58	5.30
MAX	6.2	14	11	9.7	10	26	203	166	77	62	20	8.4
MIN	4.3	5.3	9.2	8.9	7.8	9.4	17	79	9.4	5.2	4.8	3.9
AC-FT	319	591	604	574	515	966	5540	7350	2050	595	466	316

CAL YR 1988 TOTAL 10733.1 MEAN 29.3 MAX 250 MIN 3.5 AC-FT 21290
WTR YR 1989 TOTAL 10022.9 MEAN 27.5 MAX 203 MIN 3.9 AC-FT 19880

09060550 ROCK CREEK AT CRATER, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1984 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1986 to September 1987.
WATER TEMPERATURES: April 1986 to September 1987.

INSTRUMENTATION.--Water-quality monitor April 1986 to September 1987.

REMARKS.--Daily maximum and minimum specific-conductance data available in district office. Water-quality monitor was not operated during winter.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 187 microsiemens Aug.28, 1986; minimum, 46 microsiemens several days during May and June, 1986.
WATER TEMPERATURE: Maximum, 18.9°C July 26,1987; minimum, 0.0°C many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT										
04...	1020	4.4	--	8.1	8.0	9.3	74	3	22	4.6
MAR										
21...	1500	22	133	8.3	2.5	10.6	63	7	18	4.3
MAY										
16...	1300	110	67	8.1	6.0	10.0	38	9	11	2.5
AUG										
22...	1520	6.2	148	8.2	15.0	8.3	73	4	22	4.3

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
OCT										
04...	3.9	0.2	1.0	71	11	0.7	0.10	11	97	0.13
MAR										
21...	4.1	0.2	1.0	56	14	0.7	0.10	14	90	0.12
MAY										
16...	3.1	0.2	1.0	29	5.0	0.5	0.10	12	53	0.07
AUG										
22...	4.3	0.2	1.2	69	8.0	0.5	0.10	11	93	0.13

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)
OCT									
04...	1.12	--	--	<0.10	--	<0.01	--	--	--
MAR									
21...	5.34	<0.01	--	0.10	--	0.070	--	0.23	--
MAY									
16...	15.7	<0.01	<0.01	<0.10	<0.10	<0.01	0.02	--	0.28
AUG									
22...	1.55	<0.01	--	<0.10	--	<0.01	--	--	--

DATE	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
OCT									
04...	0.30	--	--	0.02	--	0.01	--	--	--
MAR									
21...	0.30	--	0.40	0.04	--	0.03	--	4.4	3.1
MAY									
16...	0.30	0.30	--	0.02	0.01	<0.01	<0.01	5.6	5.6
AUG									
22...	0.40	--	--	0.02	--	<0.01	--	2.4	2.4

09060550 ROCK CREEK AT CRATER, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
OCT 04...	1020	--	--	--	--	--	--	--	--	--	--
MAR 21...	1500	--	--	--	--	--	10	--	--	--	--
MAY 16...	1300	630	<1	<100	<10	150	10	<1	2	1	2
AUG 22...	1520	--	--	--	--	--	30	--	--	--	--

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
OCT 04...	--	10	--	--	--	--	--	--	--	--	--
MAR 21...	--	130	--	--	--	--	--	--	--	--	--
MAY 16...	440	130	1	10	<0.10	3	3	<1	<1	50	<10
AUG 22...	--	12	--	--	--	--	--	--	--	--	--

09060770 ROCK CREEK AT McCOY, CO

LOCATION.--Lat 39°54'44", long 106°43'30", in SE¼NE¼ sec.6, T.2 S., R.83 W., Eagle County, Hydrologic Unit 14010001, on right bank 1,900 ft downstream from bridge on State Highway 131 and 0.25 mi south of McCoy.

DRAINAGE AREA.--198 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1982 to September 1983 (measurements only), October 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,660 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 20 to Feb. 24, Feb. 28 to Mar. 1, and Mar. 3-6. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of approximately 5,000 acres upstream from station. Several observations of specific conductance and water temperature were obtained and published elsewhere in this report.

AVERAGE DISCHARGE.--6 years, 82.3 ft^3/s; 59,630 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,760 ft^3/s, May 16, 1984, gage height, 4.74 ft, (outside highwater-mark); minimum daily, 4.7 ft^3/s, Sept. 9, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 22	2400	*354	*2.15				

Minimum daily, 6.6 ft^3/s, July 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	18	22	17	20	22	58	130	92	16	20	10
2	15	17	22	16	20	23	52	129	81	13	23	11
3	15	18	21	16	21	23	44	129	76	9.4	36	11
4	15	20	21	17	22	23	41	126	71	8.0	25	11
5	17	19	20	17	22	23	42	128	71	7.9	21	11
6	18	18	20	18	23	24	53	134	75	7.5	20	10
7	18	20	20	18	24	26	95	159	61	7.1	18	13
8	17	25	19	18	24	26	162	177	60	7.1	17	13
9	17	26	19	18	25	29	160	211	60	7.5	17	16
10	18	23	19	17	26	34	90	209	61	8.3	16	15
11	19	29	18	18	26	36	91	220	85	8.5	16	13
12	18	23	18	18	26	37	78	217	63	9.9	19	11
13	15	26	18	18	25	39	82	190	62	11	23	15
14	14	29	18	19	25	37	96	179	52	25	21	14
15	14	28	18	19	25	40	119	187	43	19	23	13
16	13	23	19	18	24	39	137	162	40	14	22	14
17	12	25	19	18	24	40	162	155	39	9.5	19	14
18	13	27	19	18	24	52	202	154	39	8.6	20	15
19	15	24	18	18	24	57	193	180	34	7.5	20	15
20	14	22	18	18	24	50	193	171	29	6.7	21	15
21	15	21	17	18	24	49	231	181	24	6.6	19	20
22	17	22	16	19	24	45	275	179	23	9.1	18	18
23	17	22	16	19	24	45	296	192	24	8.8	16	17
24	16	22	17	19	23	50	295	191	23	14	16	16
25	17	23	17	19	23	70	281	172	22	19	15	16
26	16	21	17	18	23	99	255	148	20	18	15	16
27	16	22	16	18	22	102	235	142	20	18	15	15
28	16	22	16	19	22	87	191	136	19	21	16	15
29	17	21	17	20	---	98	168	127	18	29	16	14
30	17	22	17	20	---	58	147	113	17	80	15	14
31	18	---	17	20	---	52	---	102	---	31	11	---
TOTAL	494	678	569	563	659	1435	4524	5030	1404	466.0	589	421
MEAN	15.9	22.6	18.4	18.2	23.5	46.3	151	162	46.8	15.0	19.0	14.0
MAX	19	29	22	20	26	102	296	220	92	80	36	20
MIN	12	17	16	16	20	22	41	102	17	6.6	11	10
AC-FT	980	1340	1130	1120	1310	2850	8970	9980	2780	924	1170	835

CAL YR 1988 TOTAL 20426.3 MEAN 55.8 MAX 457 MIN 4.7 AC-FT 40520
WTR YR 1989 TOTAL 16832.0 MEAN 46.1 MAX 296 MIN 6.6 AC-FT 33390

09060770 ROCK CREEK AT MCCOY, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.-- December 1984 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 04...	1330	15	372	8.2	9.5	10.0	160	2	43	13
MAR 21...	1045	45	400	8.3	1.0	11.3	190	42	52	14
MAY 16...	1000	167	189	7.9	6.0	--	87	13	25	6.0
AUG 22...	1250	18	379	8.4	14.5	9.6	180	8	48	14

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT 04...	13	0.5	4.5	159	39	2.1	0.20	12	222	0.30
MAR 21...	12	0.4	4.2	146	64	3.3	0.20	15	252	0.34
MAY 16...	5.4	0.3	1.5	74	20	1.0	0.10	12	116	0.16
AUG 22...	14	0.5	5.3	170	37	2.2	0.30	12	235	0.32

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)
OCT 04...	8.91	--	--	<0.10	--	<0.01	--	--	--
MAR 21...	30.7	<0.01	--	0.10	--	0.07	--	0.43	--
MAY 16...	52.1	<0.01	<0.01	<0.10	<0.10	<0.01	0.01	--	0.29
AUG 22...	11.1	<0.01	--	<0.10	--	0.01	--	--	--

DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHOROUS TOTAL (MG/L AS P)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
OCT 04...	0.30	--	--	0.01	--	<0.01	--	--	--
MAR 21...	0.50	--	0.60	0.06	--	0.05	--	7.2	5.7
MAY 16...	0.70	0.30	--	0.02	0.01	<0.01	<0.01	5.8	6.3
AUG 22...	<0.20	--	--	0.02	--	<0.01	--	5.3	4.9

09060770 ROCK CREEK AT MCCOY, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	BORON, DISSOLVED (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 04...	1330	--	--	--	--	--	--	--	--	--	--
MAR 21...	1045	--	--	--	--	--	20	--	--	--	--
MAY 16...	1000	650	<1	<100	<10	80	10	<1	2	<1	3
AUG 22...	1250	--	--	--	--	--	40	--	--	--	--

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
OCT 04...	--	23	--	--	--	--	--	--	--	--	--
MAR 21...	--	68	--	--	--	--	--	--	--	--	--
MAY 16...	590	110	1	30	<0.10	4	2	<1	<1	160	<10
AUG 22...	--	24	--	--	--	--	--	--	--	--	--

09063000 EAGLE RIVER AT RED CLIFF, CO

LOCATION.--Lat 39°30'30", long 106°21'58", in NW¼SW¼ sec.20, T.6 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on left bank at Red Cliff, 0.3 mi upstream from Turkey Creek.

DRAINAGE AREA.--70.0 mi^2.

PERIOD OF RECORD.--October 1910 to September 1925, May 1944 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 2124: Drainage area. WRD Colo. 1972: 1971.

GAGE.--Water-stage recorder. Datum of gage is 8,653.80 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Jan. 8, 1911, to Sept. 30, 1925, nonrecording gage at bridge 0.2 mi downstream at different datum. May 24, 1944, to Oct. 12, 1952, water-stage recorder at site 200 ft upstream at datum 1.46 ft, lower. Prior to May 6, 1982, at site 250 ft downstream at datum 5.00 ft, lower.

REMARKS.--Estimated daily discharges: Nov. 16-25, Nov. 27 to Mar. 7, and Mar. 31 to Apr. 5. Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station by Columbine, Ewing, and Wurtz ditches. Transbasin diversion upstream from station from Robinson Reservoir, capacity, 2,520 acre-ft to Tenmile Creek for mining development. Small diversions for irrigation of 400 acres upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--60 years (water years 1911-25, 1945-89), 47.7 ft^3/s; 34,560 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 1,010 ft^3/s, June 5, 1912, gage height, 4.0 ft, site and datum then in use, from rating curve extended above 500 ft^3/s; maximum gage height recorded, 6.43 ft, May 24, 1984; minimum daily discharge, 1.0 ft^3/s, Oct. 1, 5, 1917.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 280 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 29	2230	*194	*4.28				

Minimum daily, 3.5 ft^3/s, Dec. 27-28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	8.5	10	6.0	4.0	7.0	11	45	155	42	24	12
2	13	9.9	12	6.0	3.8	7.0	10	44	143	39	37	12
3	12	11	12	5.6	3.8	5.0	10	44	136	38	28	12
4	12	11	12	5.6	3.6	5.0	10	44	126	35	24	11
5	12	11	13	5.6	3.6	5.0	10	41	116	33	22	9.9
6	13	10	13	5.6	3.6	5.4	11	53	109	32	21	10
7	11	12	13	5.6	4.0	6.0	17	68	103	32	19	10
8	11	11	12	5.6	5.0	6.4	20	82	101	31	18	10
9	11	12	11	5.6	6.0	6.8	21	98	100	30	17	11
10	11	11	9.0	5.6	6.0	7.6	18	114	97	27	17	11
11	11	11	8.0	5.4	5.6	8.3	17	120	95	28	17	11
12	10	12	7.0	5.4	5.6	8.0	14	121	97	34	25	11
13	10	11	6.0	5.4	5.4	7.7	14	111	94	37	22	14
14	10	10	5.0	5.4	5.4	7.5	14	106	89	31	20	14
15	10	10	4.5	5.4	5.0	9.0	17	96	84	28	19	13
16	10	9.8	4.5	5.0	5.0	8.4	20	91	83	26	18	12
17	10	9.8	4.5	5.0	4.8	8.4	27	83	83	24	18	12
18	10	9.6	5.0	5.0	4.8	8.0	36	84	81	23	18	12
19	10	9.6	5.0	5.0	4.6	8.0	46	99	78	22	18	11
20	10	10	5.0	5.0	4.6	8.8	55	113	75	21	18	12
21	10	11	4.5	4.8	4.6	8.8	71	137	72	21	18	13
22	10	12	4.0	4.8	4.6	9.2	85	151	71	20	16	12
23	9.9	11	4.0	4.8	4.6	8.7	87	167	66	21	15	12
24	9.5	10	4.5	4.4	4.6	9.5	93	180	61	32	15	11
25	9.5	9.0	4.5	4.4	4.6	11	93	177	58	29	14	10
26	9.3	9.1	4.0	4.4	4.6	12	88	155	55	27	14	10
27	9.0	9.0	3.5	4.2	5.0	12	77	151	52	24	14	10
28	8.8	9.0	3.5	4.2	6.0	13	61	159	49	28	13	10
29	9.0	10	4.0	4.2	---	15	54	170	46	27	13	10
30	9.0	10	5.0	4.2	---	13	49	178	45	31	13	10
31	8.7	---	6.0	4.0	---	12	---	167	---	25	13	---
TOTAL	322.7	310.3	219.0	157.2	132.8	267.5	1156	3449	2620	898	578	338.9
MEAN	10.4	10.3	7.06	5.07	4.74	8.63	38.5	111	87.3	29.0	18.6	11.3
MAX	13	12	13	6.0	6.0	15	93	180	155	42	37	14
MIN	8.7	8.5	3.5	4.0	3.6	5.0	10	41	45	20	13	9.9
AC-FT	640	615	434	312	263	531	2290	6840	5200	1780	1150	672

CAL YR 1988 TOTAL 9677.6 MEAN 26.4 MAX 155 MIN 3.5 AC-FT 19200
WTR YR 1989 TOTAL 10449.4 MEAN 28.6 MAX 180 MIN 3.5 AC-FT 20730

09063200 WEARYMAN CREEK NEAR RED CLIFF, CO

LOCATION.--Lat 39°31'14", long 106°19'06", in SW¼SE¼ sec.15, T.6 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on left bank 0.4 mi upstream from mouth and 2.5 mi east of Red Cliff.

DRAINAGE AREA.--8.78 mi^2.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,158 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 6 to Apr. 26. Records good except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--25 years, 8.62 ft^3/s; 6,240 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 155 ft^3/s, June 20, 1983, gage height, 3.61 ft; minimum daily, 0.30 ft^3/s, Feb. 21, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 70 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 17	2000	*40	*2.39				

Minimum Daily, 0.90 ft^3/s, Feb. 21 to Mar. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	3.0	1.1	1.0	.92	.90	1.2	4.3	28	19	8.1	3.2
2	1.5	1.4	1.1	1.0	.92	.90	1.1	4.1	28	18	8.8	3.2
3	1.5	1.3	1.1	1.0	.92	.90	1.1	4.1	28	17	7.7	3.2
4	1.5	1.2	1.1	1.0	.92	.90	1.1	4.1	28	16	7.4	3.1
5	1.9	1.3	1.1	1.0	.92	.90	1.1	4.4	28	16	6.9	3.1
6	2.0	1.3	1.1	1.0	.92	.92	1.2	5.1	27	16	6.6	3.0
7	2.0	1.3	1.1	1.0	.92	.94	1.4	6.1	26	15	6.5	3.0
8	1.8	1.3	1.1	1.0	.92	.96	2.2	7.5	27	15	6.2	3.1
9	1.7	1.3	1.1	1.0	.92	.98	2.1	10	27	14	6.2	3.1
10	1.7	1.3	1.1	1.0	.92	1.0	2.1	12	29	14	6.2	3.1
11	1.7	1.3	1.1	.96	.92	1.1	2.0	14	31	13	6.1	3.1
12	1.8	1.3	1.1	.96	.92	1.2	2.0	14	34	14	6.3	3.4
13	1.9	1.3	1.1	.96	.92	1.3	2.0	13	34	13	5.9	3.6
14	1.8	1.3	1.1	.96	.92	1.5	2.1	12	34	12	5.5	3.2
15	1.6	1.3	1.1	.96	.92	1.7	2.1	11	34	12	5.2	3.1
16	1.5	1.2	1.1	.96	.92	1.7	2.2	10	35	11	5.1	3.0
17	1.5	1.2	1.1	.96	.92	1.6	2.4	9.6	37	10	5.2	3.0
18	1.5	1.2	1.1	.96	.92	1.5	2.6	10	39	9.9	5.0	3.0
19	1.5	1.2	1.1	.96	.92	1.4	2.8	11	38	9.9	4.8	3.0
20	1.6	1.2	1.1	.96	.92	1.2	3.0	13	38	9.8	5.0	3.4
21	1.7	1.2	1.0	.94	.90	1.1	3.5	15	37	9.3	4.7	3.1
22	1.6	1.2	1.0	.94	.90	1.1	4.0	16	35	9.1	4.3	3.0
23	1.6	1.2	1.0	.94	.90	1.1	4.6	17	32	11	4.3	2.9
24	1.6	1.2	1.0	.94	.90	1.1	5.6	19	28	11	4.1	2.8
25	1.5	1.2	1.0	.94	.90	1.2	5.8	20	26	10	3.9	2.8
26	1.5	1.2	1.0	.94	.90	1.3	6.0	20	25	9.6	3.9	2.7
27	1.5	1.2	1.0	.94	.90	1.4	6.2	20	23	9.0	3.6	2.7
28	1.5	1.2	1.0	.94	.90	1.4	6.2	22	22	9.9	3.6	2.6
29	1.7	1.2	1.0	.94	---	1.4	5.3	24	21	9.0	3.5	2.6
30	1.7	1.2	1.0	.94	---	1.4	4.8	25	20	8.4	3.5	2.6
31	1.6	---	1.0	.94	---	1.3	---	27	---	7.7	3.4	---
TOTAL	51.2	39.2	33.0	29.94	25.60	37.30	89.8	404.3	899	378.6	167.5	90.7
MEAN	1.65	1.31	1.06	.97	.91	1.20	2.99	13.0	30.0	12.2	5.40	3.02
MAX	2.0	3.0	1.1	1.0	.92	1.7	6.2	27	39	19	8.8	3.6
MIN	1.5	1.2	1.0	.94	.90	.90	1.1	4.1	20	7.7	3.4	2.6
AC-FT	102	78	65	59	51	74	178	802	1780	751	332	180

CAL YR 1988 TOTAL 1950.42 MEAN 5.33 MAX 50 MIN .90 AC-FT 3870
WTR YR 1989 TOTAL 2246.14 MEAN 6.15 MAX 39 MIN .90 AC-FT 4460

09063400 TURKEY CREEK NEAR RED CLIFF, CO

LOCATION.--Lat 39°31'22", long 106°20'08", in NW¼SW¼ sec.16, T.6 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on right bank 400 ft downstream from Lime Creek, 1.9 mi northeast of Red Cliff, and 2.0 mi upstream from mouth.

DRAINAGE AREA.--23.8 mi^2.

PERIOD OF RECORD.--October 1963 to current year.

REVISED RECORDS.--CO-88-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 8,918 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 10 to Apr. 5. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--26 years, 22.5 ft^3/s; 16,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 556 ft^3/s, June 8, 1985, gage height, 2.87 ft, from rating curve extended above 325 ft^3/s; maximum recorded gage height, 3.22 ft, June 24, 1983 (backwater from debris); minimum discharge, not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 160 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 23	1800	---	*2.18	June 3	2100	*83	2.16

Minimum daily discharge, 2.6 ft^3/s, Feb. 11 to Mar. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	3.7	3.2	2.8	2.8	2.6	3.2	20	74	35	16	7.7
2	4.2	3.9	3.2	2.8	2.8	2.6	3.2	18	74	33	16	7.6
3	4.2	4.1	3.2	2.8	2.8	2.6	3.0	17	78	31	15	7.5
4	4.2	3.8	3.2	2.8	2.8	2.6	3.0	16	73	30	14	7.5
5	4.7	4.0	3.2	2.8	2.8	2.6	3.0	16	75	28	14	7.2
6	5.0	4.0	3.2	2.8	2.8	2.6	3.2	17	77	28	13	6.8
7	4.7	4.1	3.2	2.8	2.8	2.8	4.7	19	77	27	12	6.8
8	4.6	4.0	3.2	2.8	2.8	2.8	5.9	26	75	26	12	7.1
9	4.4	4.1	3.2	2.8	2.8	3.0	5.7	34	76	24	12	7.2
10	4.4	4.0	3.2	2.8	2.8	3.2	5.6	38	74	23	13	7.0
11	4.2	4.0	3.0	2.8	2.6	3.2	5.6	41	74	24	12	6.9
12	4.2	4.0	3.0	2.8	2.6	3.4	5.6	41	72	26	13	7.8
13	4.2	4.0	3.0	2.8	2.6	3.8	5.7	37	71	24	12	8.0
14	4.2	3.8	3.0	2.8	2.6	5.0	6.3	34	74	21	12	7.5
15	4.2	3.8	3.0	2.8	2.6	6.0	7.4	36	73	20	11	7.2
16	4.1	3.8	3.0	2.8	2.6	6.0	8.4	32	72	19	11	6.9
17	4.0	3.8	3.0	2.8	2.6	5.4	9.4	30	69	19	11	6.9
18	4.0	3.6	3.0	2.8	2.6	5.0	11	30	69	18	10	6.9
19	4.1	3.6	3.0	2.8	2.6	4.2	13	34	70	18	10	6.9
20	4.1	3.6	3.0	2.8	2.6	3.6	15	41	68	17	11	7.4
21	4.2	3.6	3.0	2.8	2.6	3.2	19	50	69	17	9.9	7.0
22	4.1	3.4	3.0	2.8	2.6	3.0	24	57	69	16	9.5	6.9
23	4.1	3.4	3.0	2.8	2.6	3.0	26	69	59	18	9.3	6.8
24	4.1	3.4	3.0	2.8	2.6	3.0	27	74	54	19	9.0	6.7
25	4.0	3.4	3.0	2.8	2.6	3.2	30	71	48	18	8.9	6.6
26	4.0	3.4	3.0	2.8	2.6	3.4	31	67	45	17	8.6	6.6
27	4.0	3.4	3.0	2.8	2.6	3.6	30	63	42	16	8.5	6.5
28	3.9	3.4	3.0	2.8	2.6	3.6	27	72	40	18	8.3	6.4
29	3.9	3.2	3.0	2.8	---	3.6	25	68	38	16	8.1	6.2
30	4.0	3.2	3.0	2.8	---	3.6	23	71	36	16	8.0	6.0
31	3.8	---	3.0	2.8	---	3.2	---	70	---	15	7.8	---
TOTAL	130.3	111.5	95.0	86.8	74.8	109.4	389.9	1309	1965	677	345.9	210.5
MEAN	4.20	3.72	3.06	2.80	2.67	3.53	13.0	42.2	65.5	21.8	11.2	7.02
MAX	5.0	4.1	3.2	2.8	2.8	6.0	31	74	78	35	16	8.0
MIN	3.8	3.2	3.0	2.8	2.6	2.6	3.0	16	36	15	7.8	6.0
AC-FT	258	221	188	172	148	217	773	2600	3900	1340	686	418

CAL YR 1988 TOTAL 5687.8 MEAN 15.5 MAX 140 MIN 1.9 AC-FT 11280
WTR YR 1989 TOTAL 5505.1 MEAN 15.1 MAX 78 MIN 2.6 AC-FT 10920

09063900 MISSOURI CREEK NEAR GOLD PARK, CO

LOCATION.--Lat 39°23'25", long 106°28'10", Eagle County, Hydrologic Unit 14010003, on left bank 50 ft downstream from road culvert, 0.6 mi upstream from Fancy Creek, 2.2 mi southwest of Gold Park, and 10 mi southwest of Red Cliff.

DRAINAGE AREA.--6.39 mi^2.

PERIOD OF RECORD.--August 1972 to current year.

REVISED RECORDS.--WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 9,980 ft, above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 9 to Apr. 23. Records good except for estimated daily discharges, which are poor. Transmountain diversion upstream from station to Arkansas River basin through Homestake Tunnel. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--17 years, 8.31 ft^3/s; 6,020 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 300 ft^3/s, July 4, 1975, gage height, 3.19 ft, from rating curve extended above 35 ft^3/s; maximum gage height, 3.83 ft, July 30, 1983; minimum daily discharge, 0.24 ft^3/s, Feb. 12, 13, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 62 ft^3/s at 0100 July 13, gage height, 2.61 ft; minimum daily, 0.26 ft^3/s, Feb. 19 to Mar. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	.87	.90	.58	.30	.26	.84	7.0	20	13	15	2.3
2	1.3	.69	.92	.56	.30	.26	.81	6.2	19	12	15	2.1
3	1.3	.70	.92	.54	.30	.30	.80	5.7	16	12	12	2.0
4	1.3	.66	.94	.52	.30	.50	.78	5.5	14	12	10	1.9
5	1.8	.71	.94	.50	.30	.50	.78	5.5	14	12	9.0	1.8
6	2.5	.84	.94	.48	.30	.42	.90	7.0	16	18	7.8	1.7
7	2.4	.90	.94	.48	.30	.40	1.5	10	15	27	6.8	1.6
8	2.3	.84	.94	.48	.30	.40	2.00	16	17	23	6.1	1.9
9	2.2	.74	.94	.44	.30	.40	3.4	19	16	22	5.8	2.3
10	2.0	.70	.94	.44	.28	.40	3.6	22	15	22	6.1	2.1
11	1.7	.68	.92	.44	.28	.44	3.2	20	17	23	5.9	2.1
12	1.6	.68	.92	.42	.28	.50	3.0	19	17	38	6.8	2.7
13	1.7	.66	.92	.42	.28	.90	3.0	17	16	45	7.1	4.5
14	1.8	.66	.92	.42	.28	.70	3.0	15	16	28	6.0	4.1
15	1.7	.66	.92	.40	.28	.60	3.2	13	21	21	5.9	4.4
16	1.5	.64	.88	.40	.28	.50	3.4	12	29	18	5.3	4.5
17	1.4	.64	.88	.40	.28	.50	3.8	13	22	16	5.0	4.0
18	1.4	.64	.84	.38	.28	.60	4.8	16	21	14	5.4	3.6
19	1.3	.64	.84	.38	.26	.70	6.0	21	20	14	6.5	3.4
20	1.3	.66	.82	.36	.26	1.0	8.0	25	18	13	8.1	4.5
21	1.2	.66	.80	.36	.26	.90	14	26	14	13	6.2	4.0
22	1.1	.68	.78	.36	.26	.90	16	29	11	12	5.4	3.7
23	.97	.70	.76	.36	.26	1.5	15	30	10	16	4.9	3.3
24	.90	.72	.74	.34	.26	1.5	14	28	11	23	4.4	2.9
25	.88	.76	.72	.34	.26	1.0	14	22	12	17	3.9	2.7
26	.87	.78	.70	.34	.26	.90	15	19	12	16	3.5	2.6
27	.79	.82	.68	.34	.26	.80	13	21	13	14	3.2	2.4
28	.73	.84	.66	.32	.26	.70	9.8	25	15	19	3.0	2.4
29	.72	.86	.64	.32	---	.70	8.9	29	14	23	2.8	2.2
30	.70	.88	.62	.32	---	.80	8.3	27	14	18	2.7	2.1
31	.71	---	.60	.32	---	.90	---	21	---	15	2.5	---
TOTAL	43.47	21.91	25.88	12.76	7.82	20.88	184.81	551.9	485	589	198.1	85.8
MEAN	1.40	.73	.83	.41	.28	.67	6.16	17.8	16.2	19.0	6.39	2.86
MAX	2.5	.90	.94	.58	.30	1.5	16	30	29	45	15	4.5
MIN	.70	.64	.60	.32	.26	.26	.78	5.5	10	12	2.5	1.6
AC-FT	86	43	51	25	16	41	367	1090	962	1170	393	170

CAL YR 1988 TOTAL 2061.40 MEAN 5.63 MAX 51 MIN .55 AC-FT 4090
WTR YR 1989 TOTAL 2227.33 MEAN 6.10 MAX 45 MIN .26 AC-FT 4420

09064000 HOMESTAKE CREEK AT GOLD PARK, CO

LOCATION.--Lat 39°24'20", long 106°25'58", Eagle County, Hydrologic Unit 14010003, on left bank at Gold Park, 400 ft downstream from ford, at Gold Park Campground, 0.5 mi downstream from French Creek, and 8 mi southwest of Red Cliff.

DRAINAGE AREA.--36.0 mi^2.

PERIOD OF RECORD.--October 1947 to September 1954, August 1972 to current year.

REVISED RECORDS.--WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 9,200 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Aug. 1, 1972, water-stage recorder at site 1,500 ft upstream at datum 9,245 ft, above National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--Estimated daily discharges: Nov. 11 to Mar. 24, Mar. 30-31, Sept. 1-8, 10, 11, and Sept. 30. Records good except for estimated daily discharges, which are poor. Flow regulated by Homestake Lake, capacity, 44,360 acre-ft, since June 7, 1966. Transmountain diversion upstream from station to Arkansas River basin through Homestake Tunnel since June 6, 1967. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--7 years (water years 1948-54), 63.4 ft^3/s; 45,930 acre-ft/yr, prior to diversion through Homestake Tunnel; 17 years (water years 1973-89), 29.0 ft^3/s; 21,010 acre-ft/yr, subsequent to diversion through Homestake Tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,080 ft^3/s, June 13, 1953, gage height, 6.84 ft, site and datum then in use, from rating curve extended above 700 ft^3/s; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 137 ft^3/s at 2400 July 12, gage height, 4.82 ft; minimum daily, 3.6 ft^3/s, Nov. 15-18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	5.0	4.6	4.2	4.4	4.8	17	31	47	30	46	9.0
2	6.4	4.9	4.8	4.2	4.4	4.8	18	30	45	29	51	9.0
3	6.1	5.0	5.0	4.2	4.4	4.8	39	30	42	28	41	8.0
4	6.1	4.8	5.2	4.2	4.4	5.0	39	29	40	28	35	8.0
5	7.3	5.8	5.2	4.2	4.4	5.4	26	30	38	27	31	8.0
6	8.6	6.8	5.2	4.2	4.4	7.0	15	36	41	41	27	7.0
7	8.5	5.7	5.2	4.2	4.4	10	17	46	42	65	25	7.0
8	8.1	6.4	5.2	4.2	4.4	12	19	59	43	55	23	7.0
9	7.7	7.2	5.2	4.2	4.4	12	19	68	42	51	21	8.0
10	7.1	8.5	5.0	4.2	4.4	11	21	81	40	51	22	8.0
11	6.8	6.4	5.0	4.2	4.4	11	15	73	41	52	22	8.0
12	6.8	4.6	4.8	4.2	4.4	10	17	66	41	97	27	9.0
13	6.8	4.0	4.8	4.2	4.4	15	19	57	40	105	25	13
14	6.7	3.7	4.6	4.2	4.4	13	17	54	39	69	21	13
15	6.5	3.6	4.6	4.2	4.4	11	19	48	42	52	21	13
16	6.2	3.6	4.6	4.0	4.6	10	21	46	52	44	20	12
17	5.9	3.6	4.6	4.0	4.6	9.0	25	45	51	39	19	11
18	5.7	3.6	4.6	4.0	4.6	8.0	34	47	48	36	20	9.6
19	5.7	3.7	4.6	4.0	4.6	8.0	39	58	46	34	22	9.1
20	5.5	3.7	4.6	4.0	4.6	15	49	63	41	33	26	12
21	5.5	3.7	4.6	4.0	4.6	10	63	64	37	34	21	12
22	5.5	3.8	4.6	4.0	4.6	9.0	70	66	32	33	19	9.9
23	5.5	3.8	4.6	4.0	4.6	15	67	69	29	41	18	9.4
24	5.3	3.8	4.6	4.0	4.6	25	62	67	28	59	16	8.8
25	5.3	4.2	4.6	4.0	4.6	36	56	59	27	46	15	8.5
26	5.3	4.2	4.4	4.2	4.6	27	54	49	28	46	14	8.1
27	5.2	4.4	4.4	4.2	4.6	19	47	49	32	39	13	7.7
28	5.1	4.4	4.4	4.2	4.6	16	41	53	34	50	13	7.4
29	5.1	4.6	4.4	4.2	---	13	36	58	34	65	12	7.3
30	5.1	4.6	4.4	4.2	---	13	34	59	32	51	11	7.0
31	4.9	---	4.4	4.2	---	14	---	50	---	44	10	---
TOTAL	192.8	142.1	146.8	128.2	125.8	383.8	1015	1640	1174	1474	707	274.8
MEAN	6.22	4.74	4.74	4.14	4.49	12.4	33.8	52.9	39.1	47.5	22.8	9.16
MAX	8.6	8.5	5.2	4.2	4.6	36	70	81	52	105	51	13
MIN	4.9	3.6	4.4	4.0	4.4	4.8	15	29	27	27	10	7.0
AC-FT	382	282	291	254	250	761	2010	3250	2330	2920	1400	545

CAL YR 1988 TOTAL 6531.4 MEAN 17.8 MAX 125 MIN 3.6 AC-FT 12960
WTR YR 1989 TOTAL 7404.3 MEAN 20.3 MAX 105 MIN 3.6 AC-FT 14690

09064500 HOMESTAKE CREEK NEAR RED CLIFF, CO

LOCATION.--Lat 39°28'24", long 106°22'02", in NE¼NE¼ sec.6, T.7 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on right bank at downstream side of Forest Service road bridge, 2.4 mi south of Red Cliff, and 3.0 mi upstream from mouth.

DRAINAGE AREA.--58.2 mi².

PERIOD OF RECORD.--October 1910 to September 1918, May 1944 to current year. Published as "at Redcliff" October 1910 to September 1916.

REVISED RECORDS.--WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 8,783 ft above National Geodetic Vertical Datum of 1929 (river-profile survey). See WSP 1713 or 1733 for history of changes prior to May 8, 1961.

REMARKS.--Estimated daily discharges: Nov. 11 to May 23. Records fair except for estimated daily discharges, which are poor. Flow regulated by Homestake Lake (capacity, 44,360 acre-ft) since June 7, 1966. Transmountain diversions upstream from station through Homestake Tunnel (see elsewhere in this report) since June 6, 1967. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--30 years (water years 1911-18, 1945-66), 86.6 ft³/s; 62,740 acre-ft/yr, prior to diversion through Homestake Tunnel: 23 years (water years 1967-89), 43.0 ft³/s; 31,150 acre-ft/yr, subsequent to diversion through Homestake Tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 1,300 ft³/s, June 24, 1918, gage height, 6.0 ft, site and datum then in use; minimum observed, 0.60 ft³/s, Jan. 25, 1915 (discharge measurement).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 159 ft³/s at 0200 July 13, gage height, 2.52 ft; minimum daily, 2.3 ft³/s, Sept. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	7.2	4.6	4.4	4.8	6.4	35	66	75	40	53	2.3
2	8.8	7.8	4.6	4.4	4.8	6.6	50	67	71	39	61	[illegible]
3	8.7	8.5	4.8	4.4	4.8	6.8	70	[illegible]	69	36	45	[illegible]
4	8.7	9.8	4.8	4.4	4.8	7.0	70	[illegible]	61	35	[illegible]	[illegible]
5	11	8.2	4.8	4.4	4.8	9.0	50	64	57	33	31	[illegible]
6	13	7.9	4.8	4.4	4.8	13	40	66	61	83	26	2.9
7	12	10	4.8	4.4	5.0	15	30	72	63	76	22	3.0
8	13	9.2	4.8	4.4	5.0	16	30	83	[illegible]	65	20	4.1
9	12	12	4.8	4.4	5.0	16	35	96	54	60	16	6.7
10	11	8.7	4.8	4.4	5.0	15	40	117	51	61	17	7.7
11	11	6.0	4.8	4.4	5.2	15	35	113	63	59	18	[illegible]
12	11	4.4	4.6	4.4	5.2	20	35	103	65	104	25	[illegible]
13	11	3.8	4.6	4.4	5.2	25	45	109	66	119	24	[illegible]
14	12	3.6	4.6	4.4	5.4	25	40	91	61	81	18	[illegible]
15	12	3.4	4.6	4.4	5.4	22	40	93	61	62	16	[illegible]
16	11	3.4	4.6	4.4	5.4	20	45	85	72	51	15	19
17	11	3.4	4.6	4.4	5.4	19	45	80	82	44	15	17
18	10	3.4	4.6	4.4	5.6	17	50	80	69	37	15	14
19	9.8	3.4	4.6	4.4	5.6	17	60	90	71	35	14	13
20	9.8	3.4	4.6	4.4	5.8	30	70	100	65	34	23	16
21	9.0	3.6	4.6	4.4	5.8	25	90	110	51	35	16	19
22	8.7	3.6	4.6	4.4	6.0	22	100	110	51	34	12	14
23	8.7	3.6	4.6	4.4	6.0	34	100	122	47	38	10	13
24	8.7	3.8	4.6	4.4	6.2	44	90	109	41	72	8.3	11
25	8.7	4.0	4.6	4.4	6.2	50	85	100	41	54	6.6	10
26	8.6	4.2	4.6	4.6	6.4	40	80	77	40	54	5.6	9.3
27	8.7	4.2	4.6	4.6	6.4	36	80	73	46	44	5.0	9.4
28	7.8	4.4	4.6	4.6	6.4	31	78	83	47	57	4.4	8.2
29	7.7	4.4	4.6	4.6	---	30	72	88	46	76	3.8	7.5
30	8.1	4.6	4.6	4.6	---	35	68	98	44	63	3.4	6.8
31	8.0	---	4.6	4.6	---	30	---	82	---	50	3.6	---
TOTAL	309.0	167.9	144.4	137.6	152.4	696.8	1758	2704	1786	1691	586.7	305.4
MEAN	9.97	5.60	4.66	4.44	5.44	22.5	58.6	87.2	59.5	54.5	18.9	10.2
MAX	13	12	4.8	4.6	6.4	50	100	122	82	119	61	22
MIN	7.7	3.4	4.6	4.4	4.8	6.4	30	60	40	34	3.4	2.3
AC-FT	613	333	286	273	302	1380	3490	5360	3540	3350	1160	606

CAL YR 1988 TOTAL 10350.3 MEAN 28.3 MAX 186 MIN 3.4 AC-FT 20530
WTR YR 1989 TOTAL 10439.2 MEAN 28.6 MAX 122 MIN 2.3 AC-FT 20710

09065100 CROSS CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°34'05", long 106°24'43", in SW¼SW¼ sec.36, T.5 S., R.81 W., Eagle County, Hydrologic Unit 14010003, on right bank 0.4 mi upstream from mouth and 1.5 mi southeast of Minturn.

DRAINAGE AREA.--34.2 mi^2.

PERIOD OF RECORD.--May 1956 to September 1963, October 1967 to current year.

REVISED RECORDS.--WDR CO-81-2: 1980 (M). WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,992 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 18, 1956, nonrecording gage at site 0.3 mi downstream at different datum.

REMARKS.--Estimated daily discharges: Nov. 14 to Mar. 2, Mar. 29-31, and Apr. 3-5. Records good except for estimated daily discharges, which are poor. Bolts ditch exports water upstream from station to tailings ponds and recreation lake along Eagle River. Diversion 0.5 mi upstream from station for water supply of school and for municipal supply of Minturn. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--29 years, 52.4 ft^3/s; 37,960 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 754 ft^3/s, June 30, 1957, gage height, 5.45 ft; maximum gage height, 6.14 ft, Aug. 6, 1983; minimum daily discharge, 0.1 ft^3/s, Dec. 27-31, 1962, Jan. 6-8, 11-15, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 17	0500	*333	*4.36				

Minimum daily, 2.2 ft^3/s, Feb. 26-28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	4.3	3.2	3.0	2.8	2.4	9.6	36	184	124	51	13
2	6.5	4.3	3.2	3.0	2.8	3.0	8.8	36	186	116	60	12
3	6.4	4.6	3.2	3.0	2.8	3.7	8.4	35	166	108	55	11
4	6.4	5.2	3.2	3.0	2.8	7.0	8.2	33	126	106	45	11
5	7.8	4.4	3.2	3.0	2.8	5.5	8.0	32	111	102	40	11
6	10	5.1	3.2	3.0	2.6	6.1	9.1	41	143	100	35	10
7	9.4	5.3	3.2	3.0	2.6	5.5	15	63	138	100	32	9.8
8	8.8	5.2	3.2	3.0	2.6	5.8	23	97	155	87	29	9.8
9	7.8	6.3	3.2	3.0	2.6	6.1	25	127	133	76	27	13
10	7.6	8.3	3.2	3.0	2.6	5.4	22	152	124	77	28	12
11	7.1	5.8	3.2	3.0	2.6	6.4	15	151	144	72	29	11
12	6.7	7.2	3.2	3.0	2.6	7.3	13	142	173	106	56	12
13	6.6	5.9	3.2	3.0	2.6	8.3	13	102	139	130	51	22
14	6.7	5.4	3.2	3.0	2.6	9.7	15	95	137	88	40	21
15	6.7	5.0	3.2	3.0	2.4	9.1	22	79	175	71	34	20
16	6.8	4.8	3.2	3.0	2.4	6.7	31	72	237	62	32	19
17	5.9	4.4	3.2	3.0	2.4	5.9	37	67	259	55	31	17
18	5.5	4.2	3.2	3.0	2.4	7.8	46	73	198	50	31	16
19	5.8	4.0	3.2	3.0	2.4	5.4	51	117	232	47	32	15
20	5.8	4.0	3.2	3.0	2.4	7.0	59	135	224	45	54	17
21	5.5	3.8	3.2	3.0	2.4	8.3	72	178	194	44	46	21
22	5.3	3.8	3.2	3.0	2.4	4.6	84	162	113	43	37	18
23	4.9	3.6	3.2	3.0	2.4	5.1	90	216	98	42	32	15
24	4.8	3.6	3.2	3.0	2.4	7.5	99	213	82	72	29	13
25	4.6	3.4	3.2	3.0	2.4	10	90	193	115	59	26	12
26	4.5	3.4	3.2	2.8	2.2	11	98	119	119	78	23	11
27	4.6	3.4	3.2	2.8	2.2	9.7	79	123	117	58	21	11
28	4.5	3.4	3.2	2.8	2.2	10	58	167	130	59	18	11
29	4.1	3.2	3.2	2.8	---	10	46	199	137	77	17	9.9
30	4.4	3.2	3.2	2.8	---	11	40	239	129	69	16	9.3
31	4.5	---	3.0	2.8	---	11	---	198	---	54	14	---
TOTAL	193.1	138.5	99.0	91.8	70.4	222.3	1195.1	3692	4618	2377	1071	413.8
MEAN	6.23	4.62	3.19	2.96	2.51	7.17	39.8	119	154	76.7	34.5	13.8
MAX	10	8.3	3.2	3.0	2.8	11	99	239	259	130	60	22
MIN	4.1	3.2	3.0	2.8	2.2	2.4	8.0	32	82	42	14	9.3
AC-FT	383	275	196	182	140	441	2370	7320	9160	4710	2120	821

CAL YR 1988 TOTAL 14478.3 MEAN 39.6 MAX 367 MIN 1.9 AC-FT 28720
WTR YR 1989 TOTAL 14182.0 MEAN 38.9 MAX 259 MIN 2.2 AC-FT 28130

09065500 GORE CREEK AT UPPER STATION, NEAR MINTURN, CO

LOCATION.--Lat 39°37'33", long 106°16'39", in NE¼NW¼ sec.18, T.5 S., R.79 W., Eagle County, Hydrologic Unit 14010003, on right bank 10 ft downstream from bridge pier on Interstate 70, 0.2 mi upstream from Black Gore Creek, 4.4 mi east of Vail, and 8.4 mi northeast of Minturn.

DRAINAGE AREA.--14.4 mi^2 (revised).

PERIOD OF RECORD.--October 1947 to September 1956, October 1963 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 8,600 ft above National Geodetic Vertical Datum of 1929, from topographic map. Oct. 1, 1947 to Sept. 30, 1956, Oct. 1, 1963 to Sept. 30, 1980, at various sites about 1200 ft upstream at different datums. See WDR CO-80-2, for history of changes prior to Oct. 1, 1980.

REMARKS.--Estimated daily discharges: Nov. 17 to Mar. 16, and Apr. 3-4. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--35 years, 29.9 ft^3/s; 21,660 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 662 ft^3/s, June 24, 1983, gage height, 2.60 ft, from rating curve extended above 140 ft^3/s; maximum gage height, 6.65 ft, June 18, 1951, datum then in use; minimum daily discharge, 1.2 ft^3/s, Mar. 5, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s, and maximum (*).

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 29	2230	*200	*1.49	No other peak greater than base discharge.			

Minimum daily, 1.5 ft^3/s, Jan. 29 to Feb. 5

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	2.6	3.0	2.5	1.5	2.0	5.2	19	132	61	26	7.4
2	3.4	3.1	3.0	2.5	1.5	2.0	4.8	18	122	59	34	7.4
3	3.6	3.4	3.0	2.4	1.5	2.0	4.8	18	111	55	30	7.0
4	3.6	3.1	3.0	2.3	1.5	2.0	4.5	17	92	54	26	7.0
5	4.2	3.4	3.0	2.1	1.5	2.0	4.5	16	92	53	22	7.0
6	4.8	3.9	3.0	2.0	1.6	2.0	3.9	23	113	51	21	6.6
7	4.5	3.9	3.0	2.0	1.7	2.0	4.5	40	108	47	19	6.6
8	4.2	3.6	3.0	2.0	1.9	2.1	6.0	60	113	46	17	6.2
9	3.9	3.6	3.0	2.0	2.0	2.2	6.2	76	111	40	15	6.2
10	3.9	3.6	3.0	2.0	2.0	2.3	5.8	86	109	38	17	6.2
11	3.9	3.1	3.0	2.0	2.0	2.4	5.5	78	114	39	18	6.2
12	3.6	2.9	3.0	2.0	2.0	2.5	5.2	74	123	47	18	6.6
13	3.9	3.1	3.0	2.0	2.0	2.6	5.1	61	104	52	18	6.6
14	3.9	2.9	3.0	2.0	2.0	2.7	6.2	54	102	43	17	7.0
15	3.6	2.6	3.0	2.0	2.0	2.7	9.1	45	117	37	15	7.0
16	3.6	2.4	3.0	2.0	2.0	2.8	12	40	141	34	15	7.0
17	3.4	3.0	3.0	2.0	2.0	2.9	16	38	141	30	15	6.8
18	3.4	3.0	3.0	2.0	2.0	2.9	21	47	126	28	14	6.6
19	3.1	3.0	3.0	2.0	2.0	2.9	24	82	133	26	13	6.6
20	3.1	3.0	3.0	2.0	2.0	2.6	34	108	122	25	18	6.6
21	3.1	3.0	3.0	2.0	2.0	3.0	46	109	106	23	18	6.6
22	2.9	3.0	3.0	2.0	2.0	2.9	52	110	70	22	15	6.4
23	2.6	3.0	2.9	1.9	2.0	2.9	55	138	58	26	14	6.2
24	2.6	3.0	2.8	1.8	2.0	2.9	59	135	53	37	13	6.2
25	2.6	3.0	2.6	1.8	2.0	3.3	59	111	54	40	12	6.2
26	2.6	3.0	2.5	1.7	2.0	4.5	53	78	58	47	11	6.2
27	2.6	3.0	2.5	1.6	2.0	4.5	42	88	63	35	11	6.2
28	2.4	3.0	2.5	1.6	2.0	4.8	33	122	64	35	11	6.0
29	2.6	3.0	2.5	1.5	---	6.9	27	147	65	34	9.6	5.8
30	2.9	3.0	2.5	1.5	---	6.6	22	166	62	32	9.2	5.8
31	2.9	---	2.5	1.5	---	5.5	---	141	---	27	9.2	---
TOTAL	105.0	93.2	89.3	60.7	52.7	95.4	636.3	2345	2979	1223	521.0	196.2
MEAN	3.39	3.11	2.88	1.96	1.88	3.08	21.2	75.6	99.3	39.5	16.8	6.54
MAX	4.8	3.9	3.0	2.5	2.0	6.9	59	166	141	61	34	7.4
MIN	2.4	2.4	2.5	1.5	1.5	2.0	3.9	16	53	22	9.2	5.8
AC-FT	208	185	177	120	105	189	1260	4650	5910	2430	1030	389

CAL YR 1988 TOTAL 9223.6 MEAN 25.2 MAX 236 MIN 2.4 AC-FT 18300
WTR YR 1989 TOTAL 8396.8 MEAN 23.0 MAX 166 MIN 1.5 AC-FT 16660

09066000 BLACK GORE CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°35'47", long 106°15'52", Eagle County, Hydrologic Unit 14010003, on right bank 200 ft from U.S. Highway 6, 0.3 mi upstream from Timber Creek, 2.5 mi upstream from mouth, and 9 mi east of Minturn.

DRAINAGE AREA.--12.6 mi² (revised).

PERIOD OF RECORD.--October 1947 to September 1956, October 1963 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,150 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to October 1963, at site 15 ft upstream, at present datum.

REMARKS.--Estimated daily discharges: Nov. 6, 9, 10, and Nov. 15 to Apr. 26. Records good except for estimated daily discharges, which are poor. No diversions upstream from station. Natural regulation by two small recreation lakes upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--35 years, 17.2 ft³/s; 12,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 365 ft³/s, June 7, 1952, gage height, 5.42 ft; maximum gage height, 6.00 ft, Mar. 30, 1968 (backwater from ice); minimum daily discharge, 0.90 ft³/s, Feb. 22, 1968, Jan. 30, 1970, Feb. 4 to Mar. 6, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 29	2000	*131	*3.92				

Minimum daily, 1.7 ft³/s, Jan. 27 to Feb. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	2.1	2.1	2.0	1.7	2.0	4.2	11	87	17	7.5	3.2
2	2.4	2.2	2.0	2.0	1.7	2.0	4.0	12	80	16	10	3.1
3	2.4	2.3	2.0	2.0	1.7	2.0	3.7	11	73	15	7.5	3.1
4	2.4	1.8	2.0	2.0	1.7	2.0	3.5	11	67	14	6.5	3.0
5	2.9	2.8	2.0	2.0	1.7	2.0	4.0	12	65	13	6.0	3.0
6	2.8	2.8	2.0	2.0	1.8	2.0	4.5	16	64	12	5.6	3.0
7	2.7	2.7	2.0	2.0	1.8	2.0	5.0	24	60	12	5.3	2.9
8	2.5	2.8	2.0	2.0	1.8	2.0	5.6	36	58	12	5.1	3.3
9	2.5	3.0	2.0	2.0	1.9	2.1	5.2	44	55	11	5.0	3.3
10	2.4	3.1	2.0	2.0	1.9	2.1	4.7	46	53	11	7.0	3.2
11	2.3	3.2	2.0	2.0	2.0	2.2	4.4	49	54	11	6.3	3.2
12	2.3	3.5	2.0	2.0	2.0	2.2	4.0	49	58	14	6.0	4.3
13	2.4	3.2	2.0	2.0	2.0	2.3	4.0	42	53	13	5.7	4.7
14	2.3	3.0	2.0	2.0	2.0	2.3	4.5	39	48	11	5.2	4.2
15	2.3	3.0	2.0	2.0	2.0	2.4	5.2	32	46	9.8	4.8	3.8
16	2.2	3.0	2.0	2.0	2.0	2.5	6.0	29	46	9.2	4.7	3.5
17	2.2	2.9	2.0	2.0	2.0	2.5	7.0	29	46	8.3	4.8	3.3
18	2.2	2.8	2.0	2.0	2.0	2.5	8.0	36	42	8.0	4.7	3.2
19	2.3	2.7	2.0	2.0	2.0	2.5	9.0	51	40	7.3	5.0	3.1
20	2.2	2.7	2.0	2.0	2.0	2.5	10	67	38	6.7	5.4	3.5
21	2.2	2.7	2.0	2.0	2.0	2.5	12	75	36	6.5	4.6	3.2
22	2.2	2.7	2.0	2.0	2.0	2.5	14	82	33	6.9	4.3	3.1
23	2.2	2.7	2.0	2.0	2.0	2.5	16	95	30	7.6	4.0	3.1
24	2.1	2.7	2.0	1.9	2.0	2.7	18	100	28	9.4	3.8	3.0
25	2.1	2.6	2.0	1.8	2.0	3.0	21	87	26	9.9	3.7	3.0
26	2.1	2.5	2.0	1.8	2.0	3.4	24	73	24	8.4	3.6	2.9
27	2.1	2.4	2.0	1.7	2.0	3.8	20	80	23	7.8	3.5	2.9
28	2.1	2.3	2.0	1.7	2.0	4.5	16	92	21	9.5	3.5	2.8
29	2.1	2.3	2.0	1.7	---	5.0	14	103	20	8.9	3.4	2.8
30	2.3	2.2	2.0	1.7	---	4.7	12	102	18	7.8	3.4	2.8
31	2.1	---	2.0	1.7	---	4.4	---	92	---	6.9	3.3	---
TOTAL	71.7	80.7	62.1	60.0	53.7	83.1	273.5	1627	1392	320.9	159.2	97.5
MEAN	2.31	2.69	2.00	1.94	1.92	2.68	9.12	52.5	46.4	10.4	5.14	3.25
MAX	2.9	3.5	2.1	2.0	2.0	5.0	24	103	87	17	10	4.7
MIN	2.1	1.8	2.0	1.7	1.7	2.0	3.5	11	18	6.5	3.3	2.8
AC-FT	142	160	123	119	107	165	542	3230	2760	637	316	193

CAL YR 1988 TOTAL 4437.3 MEAN 12.1 MAX 119 MIN 1.8 AC-FT 8800
WTR YR 1989 TOTAL 4281.4 MEAN 11.7 MAX 103 MIN 1.7 AC-FT 8490

09066100 BIGHORN CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°38'24", long 106°17'34", in N½ sec.12, T.5 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on left bank 0.3 mi upstream from U.S. Highway 6, 0.4 mi upstream from mouth, 4.5 mi east of Vail, and 8.5 mi northeast of Minturn.

DRAINAGE AREA.--4.54 mi^2 (revised).

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 8,625 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-19, and Nov. 17 to Mar. 16. Records good except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--26 years, 9.92 ft^3/s; 7,190 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 338 ft^3/s, June 8, 1985, gage height, 4.10 ft, from rating curve extended above 82 ft^3/s; maximum gage height, 4.26 ft, June 8, 1985 (backwater from debris); minimum daily discharge determined, 0.10 ft^3/s, Feb. 8, 1967, Jan. 30, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 9	2130	52	3.24	May 28	2000	*71	*3.37
May 20	2100	*71	*3.37	June 16	1800	*71	*3.37
May 22	2000	*71	*3.37				

Minimum daily discharge, 0.66 ft^3/s, Jan. 24-31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	.84	.90	.80	.70	.70	1.6	5.4	47	20	9.9	2.4
2	1.6	.85	.90	.80	.70	.70	1.5	5.1	46	18	15	2.3
3	1.6	.92	.90	.76	.70	.70	1.5	4.9	37	17	11	2.2
4	1.6	.87	.90	.72	.70	.70	1.4	4.7	28	16	9.3	2.1
5	2.2	.91	.90	.70	.70	.70	1.3	4.8	29	15	7.7	2.1
6	1.9	.97	.90	.70	.70	.70	1.3	7.6	38	15	6.4	2.0
7	1.8	.95	.90	.70	.70	.70	1.7	15	38	14	5.6	1.8
8	1.7	.97	.90	.70	.70	.72	2.1	28	37	12	5.2	2.1
9	1.6	.98	.90	.70	.70	.76	2.1	39	32	11	4.9	2.2
10	1.5	.93	.90	.70	.70	.78	1.9	41	31	11	5.3	2.0
11	1.4	.95	.90	.70	.70	.80	1.9	36	34	11	5.5	1.8
12	1.3	.93	.90	.70	.70	.82	1.8	32	38	16	6.2	2.2
13	1.3	.99	.90	.70	.70	.84	1.8	24	33	14	5.8	2.3
14	1.2	.95	.90	.70	.70	.86	2.1	20	33	12	5.1	2.2
15	1.2	.94	.90	.70	.70	.88	2.8	14	41	9.7	4.7	2.0
16	1.1	.85	.90	.70	.70	.90	3.7	11	55	8.9	4.3	1.9
17	1.1	.90	.90	.70	.70	.94	4.7	10	54	8.2	4.0	1.8
18	1.0	.90	.90	.70	.70	.91	5.4	17	46	7.5	4.1	1.8
19	1.0	.90	.90	.70	.70	.90	6.4	35	47	6.7	4.2	1.8
20	1.0	.90	.90	.70	.70	.91	9.0	48	41	6.1	4.8	2.0
21	.98	.90	.90	.70	.70	.95	14	50	32	5.8	4.1	2.0
22	.94	.90	.90	.70	.70	.98	18	47	20	6.6	3.8	1.9
23	.92	.90	.90	.68	.70	.95	20	58	16	8.8	3.5	1.8
24	.92	.90	.86	.66	.70	1.0	22	52	16	12	3.4	1.7
25	.89	.90	.84	.66	.70	1.2	23	42	20	13	3.2	1.7
26	.88	.90	.80	.66	.70	1.4	19	28	21	14	3.0	1.6
27	.87	.90	.80	.66	.70	1.5	15	33	22	10	2.9	1.6
28	.83	.90	.80	.66	.70	1.7	10	49	21	20	2.7	1.6
29	.88	.90	.80	.66	---	2.0	7.7	58	21	24	2.6	1.5
30	.92	.90	.80	.66	---	1.8	6.3	57	20	15	2.6	1.5
31	.91	---	.80	.66	---	1.6	---	50	---	11	2.4	---
TOTAL	38.64	27.40	27.20	21.64	19.60	31.00	211.0	926.5	994	389.3	163.2	57.9
MEAN	1.25	.91	.88	.70	.70	1.00	7.03	29.9	33.1	12.6	5.26	1.93
MAX	2.2	.99	.90	.80	.70	2.0	23	58	55	24	15	2.4
MIN	.83	.84	.80	.66	.70	.70	1.3	4.7	16	5.8	2.4	1.5
AC-FT	77	54	54	43	39	61	419	1840	1970	772	324	115

CAL YR 1988 TOTAL 3109.46 MEAN 8.50 MAX 76 MIN .76 AC-FT 6170
WTR YR 1989 TOTAL 2907.38 MEAN 7.97 MAX 58 MIN .66 AC-FT 5770

09066150 PITKIN CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°38'37", long 106°18'07", in SW¼SW¼ sec.1, T.5 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on left bank, 1,000 ft upstream from U.S. Highway 6, 1,200 ft upstream from mouth, 4.0 mi east of Vail, and 8 mi northeast of Minturn.

DRAINAGE AREA.--5.32 mi^2.

PERIOD OF RECORD.--Annual maximum and occasional low-flow measurements water years 1965-66. October 1966 to current year.

REVISED RECORDS.--WRD Colo. 1971: 1967-70. WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 8,525 ft above National Geodetic Vertical Datum of 1929, from topographic map. Oct. 1, 1964, to Sept. 30, 1966, crest-stage gage at datum 0.98 ft lower, at site 300 ft downstream.

REMARKS.--Estimated daily discharges: Nov. 17 to Mar. 15. Records good except for estimated daily discharges, which are poor. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--23 years, 11.8 ft^3/s; 8,550 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 265 ft^3/s, June 8, 1985, gage height, 2.85 ft; maximum gage height, 3.60 ft, June 21, 1983 (backwater from debris); minimum daily discharge, 0.24 ft^3/s, Oct. 29 to Nov. 1, 1972.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 60 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 28	2130	*43	*2.40				

Minimum daily, 0.96 ft^3/s, Feb. 4-9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	1.3	1.5	1.3	1.0	1.0	1.9	7.4	30	17	10	3.2
2	2.0	1.3	1.5	1.3	1.0	1.0	1.9	6.8	29	15	13	3.1
3	2.0	1.3	1.5	1.2	1.0	1.0	2.1	6.5	27	15	10	3.3
4	2.0	1.4	1.5	1.2	.96	1.0	2.2	6.4	24	15	9.8	3.5
5	2.7	1.6	1.5	1.1	.96	1.0	1.9	6.5	24	15	9.2	3.4
6	2.7	1.9	1.5	1.1	.96	1.0	1.8	8.6	26	14	8.1	3.3
7	2.4	1.8	1.5	1.0	.96	1.0	2.2	14	26	13	6.9	3.3
8	2.2	1.6	1.5	1.0	.96	1.0	2.9	21	27	12	6.3	3.7
9	2.1	1.6	1.5	1.0	.96	1.1	2.6	25	24	11	5.9	4.0
10	2.2	2.0	1.5	1.0	1.0	1.1	2.4	27	22	11	6.1	3.7
11	2.1	1.9	1.5	1.0	1.0	1.2	2.4	26	23	11	6.5	3.6
12	2.0	1.8	1.5	1.0	1.0	1.3	2.2	24	25	14	6.9	4.1
13	2.0	1.8	1.5	1.0	1.0	1.3	2.2	19	23	13	6.5	4.4
14	1.9	1.6	1.5	1.0	1.0	1.4	2.6	17	23	11	5.8	4.2
15	1.8	1.7	1.5	1.0	1.0	1.4	3.3	14	28	10	5.5	3.9
16	1.7	1.7	1.5	1.0	1.0	1.4	3.8	13	32	9.8	5.4	3.6
17	1.6	1.9	1.5	1.0	1.0	1.4	4.3	12	31	9.4	5.3	3.4
18	1.6	1.9	1.5	1.0	1.0	1.3	4.8	16	29	8.9	5.5	3.3
19	1.6	1.9	1.5	1.0	1.0	1.3	5.8	25	29	8.4	5.5	3.3
20	1.7	1.9	1.5	1.0	1.0	1.4	8.1	31	28	8.0	6.3	3.4
21	1.6	1.9	1.5	1.0	1.0	1.3	12	34	24	7.7	5.4	3.4
22	1.5	1.9	1.5	1.0	1.0	1.3	15	33	16	8.2	5.0	3.2
23	1.4	1.9	1.5	1.0	1.0	1.3	16	36	14	8.6	4.8	3.2
24	1.4	1.9	1.4	1.0	1.0	1.3	17	35	14	9.8	4.6	3.1
25	1.4	1.8	1.4	1.0	1.0	1.6	17	30	16	11	4.4	3.0
26	1.4	1.7	1.3	1.0	1.0	1.9	16	24	16	12	4.2	3.0
27	1.3	1.6	1.3	1.0	1.0	1.9	13	26	16	9.9	4.0	3.0
28	1.3	1.6	1.3	1.0	1.0	2.1	7.1	32	16	12	3.8	3.0
29	1.3	1.5	1.3	1.0	---	2.4	9.8	36	17	12	3.6	3.0
30	1.4	1.5	1.3	1.0	---	2.2	8.6	35	17	11	3.5	2.9
31	1.4	---	1.3	1.0	---	2.1	---	33	---	10	3.3	---
TOTAL	55.7	51.2	45.1	32.2	27.76	43.0	192.9	680.2	696	353.7	191.1	102.5
MEAN	1.80	1.71	1.45	1.04	.99	1.39	6.43	21.9	23.2	11.4	6.16	3.42
MAX	2.7	2.0	1.5	1.3	1.0	2.4	17	36	32	17	13	4.4
MIN	1.3	1.3	1.3	1.0	.96	1.0	1.8	6.4	14	7.7	3.3	2.9
AC-FT	110	102	89	64	55	85	383	1350	1380	702	379	203

CAL YR 1988 TOTAL 2951.55 MEAN 8.06 MAX 60 MIN .75 AC-FT 5850
WTR YR 1989 TOTAL 2471.36 MEAN 6.77 MAX 36 MIN .96 AC-FT 4900

09066200 BOOTH CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°38'54", long 106°19'21", at NE¼SE¼ of sec.3, T.5 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on center bridge pier 100 ft upstream from U.S. Highway 6, 0.4 mi upstream from mouth, 3.0 mi northeast of Vail, and 7.0 mi northeast of Minturn.

DRAINAGE AREA.--6.02 mi^2 (revised).

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,325 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 4, 1984, gage at site 1,000 ft upstream at different datum (gage destroyed by rock slide).

REMARKS.--Estimated daily discharges: Nov. 16 to Mar. 15, and Apr. 12 to June 5. Records good except for estimated daily discharges, which are poor. No diversion or regulation upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--25 years, 12.3 ft^3/s; 8,910 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 355 ft^3/s, June 15, 1978, gage height, 4.07 ft; maximum gage height, 4.62 ft, June 18, 1983 (backwater from debris); minimum daily discharge, 0.20 ft^3/s, Feb. 8, 1967, Jan. 29, 1970, Feb. 10-11, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 76 ft^3/s, about May 29, gage height, 3.07 ft, and at 1800 June 18, gage height, 3.07 ft; minimum daily, 0.59 ft^3/s, Apr. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.1	.96	.90	.60	.70	1.8	11	46	21	8.8	1.1
2	1.0	1.1	.92	.90	.60	.70	1.7	9.5	42	20	13	1.0
3	.95	1.2	.90	.90	.60	.70	1.7	8.4	38	19	9.8	.94
4	.94	1.2	.90	.86	.60	.70	.59	8.0	38	17	8.8	.89
5	1.4	1.3	.90	.82	.60	.70	.67	7.8	35	17	7.4	.85
6	1.4	1.5	.90	.80	.62	.70	1.6	8.0	39	16	6.0	.81
7	1.3	1.5	.90	.76	.64	.70	2.5	10	39	14	5.2	.77
8	1.3	1.4	.90	.74	.66	.70	3.2	17	39	13	4.6	1.1
9	1.2	1.4	.90	.70	.70	.70	2.5	24	38	12	4.1	1.3
10	1.3	1.6	.90	.70	.70	.78	2.1	29	38	12	4.4	1.1
11	1.2	1.6	.90	.70	.70	.86	2.0	32	38	12	4.2	1.1
12	1.2	1.6	.90	.70	.70	.94	2.0	29	39	15	4.5	1.4
13	1.2	1.7	.90	.70	.70	1.1	2.0	25	38	14	4.3	1.6
14	1.2	1.7	.90	.70	.70	1.2	2.2	22	39	11	3.5	1.5
15	1.1	1.8	.90	.70	.70	1.4	2.6	20	44	9.7	3.2	1.3
16	1.1	1.4	.90	.70	.70	1.6	3.2	19	48	8.5	3.0	1.1
17	1.1	1.3	.90	.70	.70	1.7	3.7	16	50	7.4	2.8	1.0
18	1.1	1.3	.90	.70	.70	1.5	4.3	21	49	6.4	3.3	.99
19	1.1	1.3	.90	.70	.70	1.5	5.0	37	47	5.9	3.1	.92
20	1.1	1.3	.90	.70	.70	1.4	5.6	45	42	5.5	4.3	1.0
21	1.1	1.3	.90	.70	.70	1.4	10	48	34	5.1	3.3	.95
22	1.0	1.3	.90	.70	.70	1.4	13	45	26	5.0	2.8	.91
23	1.0	1.3	.90	.70	.70	1.4	16	56	23	5.9	2.4	.85
24	.99	1.3	.90	.70	.70	1.5	18	54	23	7.9	2.2	.83
25	1.0	1.3	.90	.66	.70	2.0	20	33	25	9.2	2.0	.79
26	1.1	1.2	.90	.64	.70	2.4	19	32	24	10	1.8	.76
27	1.1	1.2	.90	.62	.70	2.1	12	43	23	7.7	1.7	.73
28	1.1	1.1	.90	.60	.70	2.3	8.6	56	23	13	1.6	.76
29	1.1	1.1	.90	.60	---	2.6	10	58	23	14	1.5	.78
30	1.2	1.0	.90	.60	---	2.0	12	52	22	12	1.3	.80
31	1.2	---	.90	.60	---	1.8	---	47	---	9.4	1.2	---
TOTAL	35.18	40.4	27.98	22.20	18.92	41.18	189.56	922.7	1072	355.6	130.1	29.93
MEAN	1.13	1.35	.90	.72	.68	1.33	6.32	29.8	35.7	11.5	4.20	1.00
MAX	1.4	1.8	.96	.90	.70	2.6	20	58	50	21	13	1.6
MIN	.94	1.0	.90	.60	.60	.70	.59	7.8	22	5.0	1.2	.73
AC-FT	70	80	55	44	38	82	376	1830	2130	705	258	59

CAL YR 1988 TOTAL 3440.83 MEAN 9.40 MAX 93 MIN .83 AC-FT 6820
WTR YR 1989 TOTAL 2885.75 MEAN 7.91 MAX 58 MIN .59 AC-FT 5720

09066300 MIDDLE CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°38'45", long 106°22'54", in sec.6, T.5 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on right bank 200 ft upstream from Interstate Highway 70, 0.2 mi upstream from mouth, and 5.0 mi northeast of Minturn.

DRAINAGE AREA.--5.94 mi².

PERIOD OF RECORD.--October 1964 to current year.

REVISED RECORDS.--WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 8,200 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1977 at site 700 ft upstream, at different datum.

REMARKS.--Estimated daily discharges: Nov. 16 to Mar. 15. Records good except for estimated daily discharges, which are poor. No diversion or regulation upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--25 years, 6.00 ft³/s; 4,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 116 ft³/s, June 20, 1974, gage height, 2.65 ft, datum then in use; maximum gage height, 3.28 ft, June 25, 1983, backwater from debris; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 60 ft³/s, and maximum(*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 30	1800	*32	*2.30				

Minimum daily, 0.33 ft³/s, Oct. 29, Nov. 1, and Mar. 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.62	.33	.40	.40	.35	.35	.38	2.4	24	5.8	2.3	.55
2	.57	.40	.40	.40	.35	.35	.37	2.4	23	5.3	3.6	.52
3	.52	.46	.40	.38	.35	.35	.37	2.3	21	4.9	2.7	.48
4	.52	.39	.40	.36	.35	.35	.34	2.1	19	4.6	2.5	.45
5	.86	.42	.40	.35	.35	.35	.34	2.1	18	4.3	2.3	.44
6	.92	.49	.40	.35	.35	.35	.38	2.9	18	4.0	2.1	.44
7	.75	.56	.40	.35	.35	.35	.45	3.8	17	3.7	1.9	.42
8	.69	.55	.40	.35	.35	.35	.62	5.2	18	3.6	1.8	.60
9	.64	.55	.40	.35	.35	.35	.54	6.8	17	3.3	1.7	.85
10	.67	.56	.40	.35	.35	.35	.47	8.6	16	3.3	2.1	.67
11	.65	.61	.40	.35	.35	.35	.47	9.1	17	3.8	1.8	.61
12	.60	.52	.40	.35	.35	.35	.44	8.8	18	4.6	1.9	.79
13	.62	.66	.40	.35	.35	.35	.45	7.8	17	4.0	1.7	1.1
14	.56	.63	.40	.35	.35	.35	.53	7.2	17	3.3	1.5	.90
15	.51	.58	.40	.35	.35	.36	.69	6.3	18	3.0	1.4	.72
16	.48	.50	.40	.35	.35	.37	.88	5.7	20	2.7	1.3	.62
17	.47	.50	.40	.35	.35	.38	1.1	5.5	22	2.5	1.3	.57
18	.49	.50	.40	.35	.35	.35	.85	6.3	20	2.3	1.6	.54
19	.51	.50	.40	.35	.35	.35	.68	8.5	20	2.1	1.4	.50
20	.56	.50	.40	.35	.35	.34	1.5	12	19	1.9	1.7	.56
21	.52	.50	.40	.35	.35	.33	3.1	15	17	1.8	1.3	.59
22	.49	.50	.40	.35	.35	.34	3.5	17	13	1.8	1.1	.54
23	.47	.50	.40	.35	.35	.34	3.7	21	11	2.1	1.1	.52
24	.45	.50	.40	.35	.35	.36	4.2	24	9.8	3.0	.96	.48
25	.46	.47	.40	.35	.35	.40	4.6	21	9.0	3.1	.89	.46
26	.45	.45	.40	.35	.35	.43	4.4	17	8.3	3.3	.84	.43
27	.46	.43	.40	.35	.35	.41	3.9	17	7.9	2.4	.77	.39
28	.39	.42	.40	.35	.35	.42	3.3	21	7.4	3.2	.72	.42
29	.33	.40	.40	.35	---	.45	2.9	25	6.8	3.1	.69	.40
30	.40	.40	.40	.35	---	.40	2.6	27	6.2	2.9	.60	.36
31	.36	---	.40	.35	---	.38	---	25	---	2.4	.58	---
TOTAL	16.99	14.78	12.40	10.99	9.80	11.31	48.05	345.8	475.4	102.1	48.15	16.92
MEAN	.55	.49	.40	.35	.35	.36	1.60	11.2	15.8	3.29	1.55	.56
MAX	.92	.66	.40	.40	.35	.45	4.6	27	24	5.8	3.6	1.1
MIN	.33	.33	.40	.35	.35	.33	.34	2.1	6.2	1.8	.58	.36
AC-FT	34	29	25	22	19	22	95	686	943	203	96	34

CAL YR 1988 TOTAL 1397.78 MEAN 3.82 MAX 49 MIN .20 AC-FT 2770
WTR YR 1989 TOTAL 1112.69 MEAN 3.05 MAX 27 MIN .33 AC-FT 2210

09066310 GORE CREEK AT LOWER STATION, AT VAIL, CO

LOCATION.--Lat 39°38'28", long 106°23'37", in NW¼NW¼ SEC.7, T.5 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on right bank 40 ft south of the water treatment plant at Vail, 0.1 mi upstream from Red Sandstone Creek, and 0.6 mi downstream from Middle Creek.

DRAINAGE AREA.--77.1 mi².

PERIOD OF RECORD.--August 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,060 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges, August to September, 1988. Estimated daily discharges, water year 1989: Nov. 6-12, Nov. 26 to Dec. 10, Dec. 12-13, 17-19, 21-23, 27-30, Jan. 7-10, 12-21, 26-28, Feb. 4-10, 14, 16, 17, 22, Mar. 4-6, and Apr. 3. Records good except for estimated daily discharges, which are fair. No regulation or diversion upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR CURRENT PERIOD.--August to September 1988: Maximum discharge, not determined; minimum daily, 15 ft³/s, Sept. 9, 15, 27, 28.

Water year 1989.--Peak discharges greater than base discharge of 250 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 24	2200	262	8.17	May 29	2100	*726	*9.71
May 10	2300	410	8.75				

Minimum daily discharge, 8.4 ft³/s, Jan. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	21
2	---	---	---	---	---	---	---	---	---	---	---	21
3	---	---	---	---	---	---	---	---	---	---	---	19
4	---	---	---	---	---	---	---	---	---	---	---	19
5	---	---	---	---	---	---	---	---	---	---	---	18
6	---	---	---	---	---	---	---	---	---	---	---	17
7	---	---	---	---	---	---	---	---	---	---	---	17
8	---	---	---	---	---	---	---	---	---	---	---	16
9	---	---	---	---	---	---	---	---	---	---	---	15
10	---	---	---	---	---	---	---	---	---	---	---	15
11	---	---	---	---	---	---	---	---	---	---	---	21
12	---	---	---	---	---	---	---	---	---	---	---	29
13	---	---	---	---	---	---	---	---	---	---	---	28
14	---	---	---	---	---	---	---	---	---	---	---	28
15	---	---	---	---	---	---	---	---	---	---	---	25
16	---	---	---	---	---	---	---	---	---	---	---	22
17	---	---	---	---	---	---	---	---	---	---	---	20
18	---	---	---	---	---	---	---	---	---	---	34	19
19	---	---	---	---	---	---	---	---	---	---	30	18
20	---	---	---	---	---	---	---	---	---	---	27	18
21	---	---	---	---	---	---	---	---	---	---	27	22
22	---	---	---	---	---	---	---	---	---	---	30	19
23	---	---	---	---	---	---	---	---	---	---	27	19
24	---	---	---	---	---	---	---	---	---	---	25	18
25	---	---	---	---	---	---	---	---	---	---	24	17
26	---	---	---	---	---	---	---	---	---	---	22	16
27	---	---	---	---	---	---	---	---	---	---	23	15
28	---	---	---	---	---	---	---	---	---	---	23	15
29	---	---	---	---	---	---	---	---	---	---	22	16
30	---	---	---	---	---	---	---	---	---	---	21	16
31	---	---	---	---	---	---	---	---	---	---	21	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	579
MEAN	---	---	---	---	---	---	---	---	---	---	---	19.3
MAX	---	---	---	---	---	---	---	---	---	---	---	29
MIN	---	---	---	---	---	---	---	---	---	---	---	15
AC-FT	---	---	---	---	---	---	---	---	---	---	---	1150

09066310 GORE CREEK AT LOWER STATION, AT VAIL, CO--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	21	11	12	9.2	10	23	93	516	198	82	21
2	16	18	11	13	8.8	9.8	21	96	484	186	120	20
3	15	14	11	12	8.8	9.9	20	98	445	174	93	19
4	15	14	11	9.1	9.0	10	18	94	385	166	81	19
5	19	13	11	8.5	9.0	10	19	89	386	158	72	18
6	19	13	11	8.6	9.0	10	21	119	424	149	65	18
7	18	13	11	9.0	9.0	9.8	27	180	407	139	58	18
8	17	12	11	9.4	9.0	12	36	270	408	127	53	18
9	16	12	11	9.6	9.0	14	32	330	383	116	49	21
10	16	12	11	9.8	9.0	18	27	367	374	116	55	21
11	16	12	11	10	9.6	19	26	363	389	120	54	20
12	15	12	11	10	8.8	20	24	347	420	151	60	23
13	15	12	11	10	9.1	20	25	295	383	147	57	28
14	15	12	11	10	9.0	18	31	269	370	118	50	25
15	20	12	11	10	8.9	18	41	227	405	104	45	24
16	23	12	11	10	9.0	17	49	202	462	94	43	22
17	23	12	11	10	9.0	18	61	193	476	86	41	20
18	22	12	11	10	9.2	17	76	238	426	78	43	19
19	22	12	11	10	9.0	18	89	352	436	74	42	18
20	22	12	11	10	9.0	17	125	441	408	69	54	19
21	22	12	12	10	8.8	16	171	460	363	66	44	20
22	21	12	12	10	9.0	15	200	492	275	66	40	19
23	20	13	12	8.9	9.1	15	209	552	243	75	35	18
24	21	14	11	8.5	10	16	233	557	226	107	33	17
25	21	13	10	8.5	10	21	235	486	233	107	30	17
26	21	13	10	9.0	9.9	25	214	384	225	124	28	16
27	21	12	10	9.0	9.6	23	185	418	223	92	27	16
28	20	12	11	9.0	9.7	24	145	521	219	120	25	15
29	22	12	11	8.4	---	31	121	600	213	125	24	15
30	22	11	12	8.6	---	24	107	617	204	105	23	15
31	21	---	12	9.4	---	23	---	545	---	86	22	---
TOTAL	592	386	343	300.3	256.5	528.5	2611	10295	10811	3643	1548	579
MEAN	19.1	12.9	11.1	9.69	9.16	17.0	87.0	332	360	118	49.9	19.3
MAX	23	21	12	13	10	31	235	617	516	198	120	28
MIN	15	11	10	8.4	8.8	9.8	18	89	204	66	22	15
AC-FT	1170	766	680	596	509	1050	5180	20420	21440	7230	3070	1150

WTR YR 1989 TOTAL 31893.3 MEAN 87.4 MAX 617 MIN 8.4 AC-FT 63260

09066400 RED SANDSTONE CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°40'58", long 106°24'03", Eagle County, Hydrologic Unit 14010003, on left bank 150 ft upstream from road culvert, 1,400 ft upstream from Indian Creek, and 6.8 mi north of Minturn.

DRAINAGE AREA.--7.32 mi².

PERIOD OF RECORD.--October 1963 to current year.

REVISED RECORDS.--WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder, and concrete control. Elevation of gage is 9,212 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 7 to Apr. 4. Records fair except for estimated daily discharges, which are fair. No regulation or diversion upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--26 years, 9.08 ft³/s; 6,580 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 215 ft³/s, June 19, 1983, gage height, 4.66 ft, maximum gage height, 5.18 ft, Apr. 17, 1987 (backwater from ice); minimum daily discharge, 0.20 ft³/s, Jan. 30, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 70 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 22	2000	*58	*3.63				

Minimum daily, 0.50 ft³/s, Feb. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	.88	.70	.72	.68	.64	1.5	14	36	8.8	4.2	1.4
2	1.1	.86	.69	.70	.66	.60	1.6	9.1	34	8.6	7.2	1.4
3	1.1	.82	.68	.68	.62	.62	1.7	9.0	31	8.1	5.4	1.4
4	1.1	.86	.70	.70	.58	.64	1.5	5.5	29	7.6	4.6	1.4
5	1.0	.90	.72	.72	.50	.58	1.4	5.1	28	7.5	4.2	1.4
6	1.0	.84	.74	.71	.56	.52	1.5	8.1	26	7.1	3.8	1.4
7	.98	.82	.80	.68	.60	.54	1.6	12	23	6.7	3.6	1.4
8	.96	.84	.84	.66	.64	.56	2.3	16	22	6.5	3.4	1.8
9	.96	.86	.82	.70	.67	.58	2.3	23	20	6.1	3.2	2.5
10	.95	.90	.80	.72	.68	.58	2.1	29	19	5.8	3.5	2.0
11	.94	.92	.74	.72	.68	.60	1.8	30	18	5.6	3.4	1.8
12	.95	.88	.74	.68	.65	.62	1.6	30	18	5.2	3.4	1.8
13	.98	.84	.76	.62	.64	.64	1.6	29	16	4.9	3.4	1.8
14	.94	.80	.78	.66	.63	.64	1.7	29	15	4.7	3.2	1.8
15	.94	.84	.76	.70	.62	.62	2.5	28	14	4.5	2.8	1.8
16	.92	.80	.72	.68	.64	.64	3.1	25	15	4.2	2.7	1.6
17	.86	.76	.68	.66	.66	.72	3.6	25	16	3.8	2.7	1.5
18	.87	.74	.70	.65	.68	.75	5.0	24	15	3.5	2.8	1.4
19	.88	.72	.72	.66	.68	.78	6.7	26	14	3.4	2.9	1.4
20	.90	.70	.74	.67	.64	.78	8.0	36	14	3.4	2.9	1.4
21	.82	.72	.68	.68	.64	.80	9.6	49	13	3.2	2.8	1.4
22	.80	.74	.66	.69	.60	.78	11	51	13	3.3	2.6	1.4
23	.84	.76	.65	.70	.60	.86	12	58	12	3.5	2.3	1.4
24	.86	.74	.66	.70	.58	.96	14	57	12	5.0	2.3	1.4
25	.84	.70	.67	.68	.60	1.0	15	57	11	8.4	2.1	1.4
26	.80	.68	.68	.66	.64	1.1	16	54	11	7.0	1.9	1.3
27	.76	.70	.70	.64	.66	1.3	15	51	10	4.8	1.8	1.2
28	.78	.77	.68	.65	.67	1.5	15	48	9.9	5.2	1.6	1.2
29	.76	.72	.66	.66	---	1.6	15	45	9.6	5.3	1.6	1.2
30	.78	.70	.70	.67	---	1.5	15	42	9.2	4.9	1.5	1.2
31	.84	---	.74	.68	---	1.3	---	39	---	4.4	1.4	---
TOTAL	28.41	23.81	22.31	21.10	17.70	25.35	190.7	963.8	533.7	171.0	95.2	45.5
MEAN	.92	.79	.72	.68	.63	.82	6.36	31.1	17.8	5.52	3.07	1.52
MAX	1.2	.92	.84	.72	.68	1.6	16	58	36	8.8	7.2	2.5
MIN	.76	.68	.65	.62	.50	.52	1.4	5.1	9.2	3.2	1.4	1.2
AC-FT	56	47	44	42	35	50	378	1910	1060	339	189	90

CAL YR 1988 TOTAL 2648.08 MEAN 7.24 MAX 79 MIN .65 AC-FT 5250
WTR YR 1989 TOTAL 2138.58 MEAN 5.86 MAX 58 MIN .50 AC-FT 4240

09067000 BEAVER CREEK AT AVON, CO

LOCATION.--Lat 39°37'47", long 106°31'20", in NE¼SW¼ sec.12, T.5 S., R.82 W., Eagle County, Hydrologic Unit 14010003, on left bank at Avon, 550 ft upstream from U.S. Highway 6 and 24, and 700 ft upstream from mouth.

DRAINAGE AREA.--14.8 mi^2.

PERIOD OF RECORD.--January to December 1911, January 1912 to September 1914 (gage heights and discharge measurements only), May 1974 to February 1988. October 1988 to current year.

REVISED RECORDS.--WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,453 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to May 1, 1974, nonrecording gage near present site at different datum.

REMARKS.--Estimated daily discharges: Nov. 17 to Mar. 10. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation upstream and downstream from station. Slight natural regulation by several small lakes in headwaters.

AVERAGE DISCHARGE.--14 years (water years 1975-87, 1989), 13.4 ft^3/s; 9,710 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 249 ft^3/s, June 27, 1983, gage height, 3.46 ft; minimum daily, 0.55 ft^3/s, Sept. 10, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 80 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 5	0700	---	*a2.71	May 29	2100	*52	2.50

Minimum daily discharge, 1.6 ft^3/s, Feb. 6-9.
a Backwater from ice.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	2.1	2.9	2.2	1.8	2.4	4.9	9.9	45	20	14	4.5
2	2.8	2.3	3.2	2.4	1.8	2.4	4.6	9.8	43	20	23	4.4
3	2.2	2.5	3.8	2.4	1.8	2.2	4.6	9.6	39	19	15	4.4
4	2.3	2.8	4.0	2.4	1.8	2.2	4.3	9.4	36	18	13	4.3
5	3.1	3.0	4.2	2.2	1.8	2.0	4.3	9.8	34	17	11	4.3
6	3.3	2.8	3.4	2.0	1.6	2.0	6.1	12	36	17	9.4	4.4
7	3.5	3.4	3.2	2.0	1.6	2.2	6.7	16	35	16	8.7	4.0
8	3.3	3.9	3.0	2.0	1.6	3.3	6.6	24	37	15	8.2	4.8
9	3.2	3.8	3.0	2.0	1.6	3.9	5.8	28	36	15	7.7	5.6
10	2.8	3.4	3.0	2.0	1.8	3.8	5.2	30	36	14	8.5	5.4
11	2.9	3.4	3.0	2.0	1.8	4.1	5.0	32	39	14	8.5	5.2
12	2.8	3.3	3.0	2.0	2.0	4.1	4.8	31	43	19	13	5.3
13	2.6	3.5	2.8	2.2	2.0	4.5	5.1	26	38	23	13	6.7
14	2.6	3.1	2.6	2.2	2.0	3.6	5.8	24	37	16	10	6.1
15	2.5	3.7	2.4	2.2	2.0	3.2	6.5	21	37	13	9.3	5.1
16	2.4	3.0	2.4	2.4	2.0	4.2	7.5	20	42	12	8.7	4.5
17	2.4	2.8	2.2	2.4	2.0	3.8	8.4	18	47	11	8.4	4.4
18	2.6	2.6	2.2	2.4	2.0	4.1	10	20	41	10	8.9	4.3
19	2.3	2.4	2.4	2.4	2.0	4.2	11	24	42	9.7	9.8	4.0
20	2.5	2.2	2.4	2.4	2.0	4.0	14	28	40	9.6	13	4.6
21	2.6	2.2	2.6	2.4	2.0	3.7	16	33	38	9.3	10	5.4
22	2.6	2.4	2.6	2.4	2.0	3.9	18	36	31	9.4	8.7	5.0
23	3.2	2.8	2.6	2.2	2.0	4.8	19	41	28	11	7.6	4.4
24	2.3	2.8	2.4	2.2	2.0	5.5	20	44	26	15	6.9	3.7
25	2.2	2.8	2.4	2.2	2.2	5.8	20	41	26	14	6.3	3.5
26	2.1	2.6	2.4	2.2	2.2	5.3	19	35	25	17	6.0	3.5
27	2.3	2.6	2.2	2.0	2.4	4.7	17	35	24	13	5.7	3.5
28	2.1	2.6	2.0	2.0	2.4	4.9	14	40	23	13	5.6	3.5
29	2.3	2.6	2.0	2.0	---	5.3	12	44	23	14	5.0	3.4
30	2.3	2.6	2.0	2.0	---	4.4	12	48	22	12	4.7	3.3
31	2.2	---	2.2	2.0	---	4.7	---	47	---	11	4.7	---
TOTAL	81.2	86.0	84.5	67.8	54.2	119.2	298.2	846.5	1049	447.0	292.3	135.5
MEAN	2.62	2.87	2.73	2.19	1.94	3.85	9.94	27.3	35.0	14.4	9.43	4.52
MAX	3.5	3.9	4.2	2.4	2.4	5.8	20	48	47	23	23	6.7
MIN	2.1	2.1	2.0	2.0	1.6	2.0	4.3	9.4	22	9.3	4.7	3.3
AC-FT	161	171	168	134	108	236	591	1680	2080	887	580	269

WTR YR 1989 TOTAL 3561.4 MEAN 9.76 MAX 48 MIN 1.6 AC-FT 7060

09067005 EAGLE RIVER AT AVON, CO

LOCATION.--Lat 39°37'54", long 106°31'19", in SE¼NW¼ sec. 12, T.5S., R, 82 W., Eagle County, Hydrologic Unit 14010003, on left bank 100 ft downstream from bridge, 300 ft north of Highway 6 and 24, 350 ft downstream from Beaver Creek, in the city of Avon.

DRAINAGE AREA.--395 mi^2.

PERIOD OF RECORD.--October 1988 to September 1989.

GAGE.--Water-stage recorder. Elevation of gage is 7,410 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 17 to March 22, and May 30 to June 9. Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, diversions for irrigation and municipal use. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,950 ft^3/s at 2300 May 29, gage height, 4.20 ft; minimum daily, 46 ft^3/s, many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	57	58	58	54	46	104	364	1700	620	310	99
2	69	60	58	58	52	46	93	362	1600	590	423	92
3	65	62	58	58	52	46	87	360	1500	555	350	88
4	64	62	62	58	52	46	82	354	1400	543	292	84
5	73	61	64	58	52	46	86	334	1300	519	259	81
6	87	59	64	56	52	46	94	403	1200	493	229	81
7	82	70	64	56	50	46	129	563	1100	518	207	81
8	79	68	62	56	50	46	187	797	1100	479	194	83
9	77	76	62	56	50	48	192	995	1040	436	179	96
10	75	66	62	56	50	50	148	1130	1050	426	189	94
11	72	76	62	56	50	54	144	1150	1080	427	189	91
12	69	64	62	56	50	60	128	1120	1190	570	261	96
13	68	72	62	56	48	70	123	951	1050	685	253	138
14	71	73	60	56	48	70	140	890	1010	508	212	132
15	71	77	60	56	48	68	177	782	1060	419	185	123
16	68	58	60	56	48	66	228	712	1190	367	174	116
17	67	56	60	56	48	64	282	660	1320	332	167	109
18	65	56	60	56	48	62	361	692	1120	298	176	102
19	64	56	60	56	46	60	424	956	1180	278	175	97
20	65	54	60	56	46	60	509	1130	1120	266	232	102
21	64	52	60	56	46	60	655	1290	1040	255	206	114
22	63	52	60	56	46	62	758	1290	838	244	176	107
23	62	54	60	56	46	64	787	1540	739	257	157	100
24	62	56	58	56	46	77	833	1580	662	411	145	95
25	61	58	58	56	46	98	808	1450	699	371	134	89
26	60	60	58	54	46	113	794	1170	686	434	125	87
27	60	60	58	54	46	110	695	1210	671	335	119	83
28	59	60	58	54	46	109	546	1450	680	368	114	84
29	60	60	58	54	---	127	461	1610	677	428	108	82
30	60	58	58	54	---	99	412	1700	652	406	105	80
31	59	---	58	54	---	91	---	1700	---	324	103	---
TOTAL	2092	1853	1864	1734	1362	2110	10467	30695	31654	13162	6148	2906
MEAN	67.5	61.8	60.1	55.9	48.6	68.1	349	990	1055	425	198	96.9
MAX	87	77	64	58	54	127	833	1700	1700	685	423	138
MIN	59	52	58	54	46	46	82	334	652	244	103	80
AC-FT	4150	3680	3700	3440	2700	4190	20760	60880	62790	26110	12190	5760

WTR YR 1989 TOTAL 106047 MEAN 291 MAX 1700 MIN 46 AC-FT 210300

09069000 EAGLE RIVER AT GYPSUM, CO

LOCATION.--Lat 39°39'00", long 106°57'06", Eagle County, Hydrologic Unit 14010003, at bridge at Gypsum, about 400 ft upstream from Gypsum Creek, about 520 ft upstream from bridge on U.S. Highways 6 and 24, and about 550 ft upstream from gaging station.

DRAINAGE AREA.--944 mi^2, at gaging station.

PERIOD OF RECORD.--April 1947 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1947 to current year.
WATER TEMPERATURE: April 1949 to current year.

REMARKS.--Records of discharge are given for Eagle River below Gypsum (station 09070000), located 550 ft, downstream from Eagle River at Gypsum (station 09069000).

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,850 microsiemens Aug. 6, 1949; minimum daily, 130 microsiemens June 9, 10, 1976.
WATER TEMPERATURES: Maximum daily, 24°C Aug. 24, 1949 and several days in August, 1988; minimum, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,400 microsiemens Sept. 7, 22, 24, and 27-30; minimum daily, 200 microsiemens July 6.
WATER TEMPERATURES: Maximum daily, 20.0°C Oct.31, Nov.1, April 5, and several days in May, June, July, and August; minimum daily, 0.0°C on many days in November and January.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
DEC 12...	1510	153	1160	8.3	0.5	13	430	130	25	73
MAR 22...	0900	196	1040	8.0	5.0	--	410	120	26	59
MAY 16...	1530	800	310	7.9	10.0	9.3	130	37	8.6	12
SEP 12...	1045	154	1070	8.1	11.0	10	390	120	23	67

DATE	SODIUM AD-SORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
DEC 12...	2	3.3	149	280	110	0.1	9.3	723	0.98
MAR 22...	1	2.9	146	270	81	0.2	8.5	660	0.9
MAY 16...	0.5	1.3	74	55	13	0.1	6.5	179	0.24
SEP 12...	2	3.3	146	260	100	0.2	8.5	671	0.91

DATE	SOLIDS, DISSOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)
DEC 12...	299	6	0.60	0.62	0.4	0.4	1.0	0.07	0.06
MAR 22...	349	112	0.70	0.93	0.5	0.2	1.2	0.19	0.07
MAY 16...	386	9	0.10	0.11	0.7	0.3	0.8	0.04	0.02
SEP 12...	279	<1	0.30	0.33	<0.2	0.2	--	0.04	0.03

09069000 EAGLE RIVER AT GYPSUM, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	ANTI-MONY, DIS-SOLVED (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)
DEC									
12...	1510	<1	<1	<1	47	<0.5	1	5	<1
MAR									
22...	0900	<1	1	<1	53	<0.5	1	<1	1
MAY									
16...	1530	<1	<1	<1	51	<0.5	3	<1	2
SEP									
12...	1045	<1	<1	<1	61	<0.5	<1	<1	<1

DATE	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)
DEC									
12...	<1	4	3	4	<5	<5	58	<0.1	<0.1
MAR									
22...	2	8	1	6	<5	<5	170	<0.1	<0.1
MAY									
16...	<1	11	8	200	5	1	75	<0.1	<0.1
SEP									
12...	<1	3	2	6	1	<1	32	<0.1	<0.1

DATE	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
DEC								
12...	7	3	1	<1	1	3.0	80	58
MAR								
22...	8	<1	2	2	1	1.0	140	54
MAY								
16...	3	3	<1	<1	<1	1.0	160	61
SEP								
12...	2	<1	1	<1	<1	2.0	30	21

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1100	1000	---	---	1100	1100	1000	800	320	300	800	1200
2	---	1100	---	700	1100	1000	1000	800	300	300	800	1300
3	1100	1100	---	800	1000	1000	1100	800	300	360	800	1200
4	1000	1000	---	800	1000	1000	1100	800	300	360	---	1200
5	1100	1100	---	700	1100	1100	1100	800	300	---	---	1100
6	1100	1100	---	700	1100	1100	1100	800	320	200	---	1200
7	1050	---	---	700	1000	---	800	800	320	300	820	1400
8	---	---	---	900	1000	1100	800	---	300	300	900	---
9	---	---	---	900	---	1100	800	800	---	380	820	---
10	1000	---	---	700	1000	1100	800	800	---	---	900	1300
11	1050	900	---	700	1100	1100	800	900	300	300	900	1100
12	1000	900	---	---	---	---	800	---	300	300	850	1100
13	1000	900	---	900	1000	---	800	---	300	380	900	1300
14	1000	900	---	900	1000	900	800	---	310	400	800	---
15	---	900	---	---	1100	---	---	320	300	400	---	1300
16	---	900	---	---	1100	1000	---	---	300	---	---	---
17	---	800	---	900	1000	---	700	320	---	---	---	1300
18	---	800	---	900	1100	---	700	300	---	---	800	---
19	---	800	---	900	---	---	700	---	300	800	800	1300
20	1100	750	---	1000	---	---	700	300	280	---	800	---
21	1100	750	---	1000	---	1100	700	300	300	800	---	1300
22	---	800	---	1200	1000	900	700	300	300	---	1000	1400
23	1100	800	---	1200	---	1000	800	300	---	---	1000	---
24	1100	700	---	---	---	---	800	---	---	800	1200	1400
25	1100	800	---	---	1000	1000	800	310	---	800	1200	---
26	1000	700	---	---	1000	---	800	310	300	800	---	---
27	1100	700	---	1250	1000	---	800	300	280	900	1200	1400
28	1000	700	---	1200	---	1000	300	300	300	800	1200	1400
29	1100	700	---	---	---	1100	---	310	300	800	1200	1400
30	1100	750	---	---	---	1000	800	310	300	900	1200	1400
31	1000	---	---	1100	---	1000	---	310	---	---	---	---

09069000 EAGLE RIVER AT GYPSUM, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	20.0	---	---	---	---	17.0	18.0	20.0	20.0	20.0	13.0
2	---	12.0	---	.0	---	---	17.0	19.0	20.0	20.0	20.0	12.0
3	15.0	12.0	---	.0	---	---	18.0	18.0	20.0	18.0	20.0	13.0
4	15.0	8.0	---	.0	---	---	16.0	18.0	20.0	18.0	---	13.0
5	20.0	8.0	---	.0	---	---	20.0	18.0	20.0	---	---	14.0
6	15.0	6.0	---	.0	---	---	18.0	18.0	18.0	20.0	---	13.0
7	11.0	---	---	.0	---	---	17.0	17.0	18.0	19.0	18.0	12.0
8	---	---	---	.0	---	---	17.0	---	10.0	19.0	19.0	---
9	---	---	---	.0	---	---	17.0	18.0	---	18.0	20.0	---
10	12.0	---	---	.0	---	---	15.0	18.0	---	---	18.0	12.0
11	11.0	2.0	---	.0	---	---	18.0	18.0	18.0	20.0	18.0	13.0
12	11.0	2.0	---	---	---	---	17.0	---	18.0	18.0	19.0	13.0
13	11.0	2.0	---	.0	---	---	17.0	---	18.0	18.0	18.0	12.0
14	11.0	4.0	---	.0	---	---	17.0	---	16.0	18.0	20.0	---
15	---	2.0	---	---	---	---	---	10.0	18.0	18.0	---	12.0
16	---	1.0	---	---	---	---	---	---	18.0	---	---	---
17	---	.0	---	.0	---	---	14.0	10.0	---	---	---	13.0
18	---	.0	---	.0	---	---	15.0	15.0	---	---	20.0	---
19	---	.0	---	.0	---	---	15.0	---	19.0	20.0	20.0	13.0
20	15.0	.0	---	.0	---	---	16.0	18.0	18.0	---	20.0	---
21	15.0	.0	---	.0	---	7.0	15.0	18.0	20.0	19.0	---	12.0
22	---	.0	---	.0	---	10.0	15.0	18.0	20.0	---	18.0	12.0
23	16.0	.0	---	.0	---	13.0	16.0	19.0	---	---	18.0	---
24	16.0	.0	---	---	---	---	16.0	---	---	20.0	15.0	16.0
25	16.0	.0	---	---	---	15.0	16.0	20.0	---	19.0	15.0	18.0
26	14.0	.0	---	---	---	---	14.0	20.0	20.0	20.0	---	---
27	14.0	.0	---	.0	---	---	14.0	18.0	19.0	20.0	13.0	17.0
28	13.0	.0	---	.0	---	16.0	14.0	18.0	20.0	20.0	15.0	17.0
29	14.0	.0	---	---	---	16.0	---	18.0	20.0	20.0	14.0	18.0
30	14.0	.0	---	---	---	15.0	10.0	20.0	20.0	20.0	14.0	17.0
31	20.0	---	---	.0	---	17.0	---	20.0	---	---	---	---

09070000 EAGLE RIVER BELOW GYPSUM, CO

LOCATION.--Lat 39°38'58", long 106°57'11", in SW¼NW¼ sec.5, T.5 S., R.85W., Eagle County, Hydrologic Unit 14010003, on right bank 30 ft downstream from bridge on U.S. Highways 6 and 24 at Gypsum and 150 ft downstream from Gypsum Creek.

DRAINAGE AREA.--945 mi².

PERIOD OF RECORD.--October 1946 to current year.

REVISED RECORDS.--WSP 2124: WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,275.11 ft, above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 12-23, and Feb. 13-17. Records good except for estimated daily discharges, which are fair. Transmountain diversions upstream from station (see elsewhere in this report). Transbasin diversions upstream from station from Robinson Reservoir, capacity, 2,520 acre-ft, to Tenmile Creek for mining development. Many small diversions for irrigation of hay meadows upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--43 years, 577 ft³/s; 418,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,020 ft³/s, May 25, 1984, gage height, 9.46 ft; minimum daily, 110 ft³/s, Feb. 21, 1955, Feb. 3, 1956, Dec. 26, 27, 1962.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 30	0630	*2,190	*6.15				

Minimum daily, 133 ft³/s, Sept. 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	172	152	182	191	158	160	236	454	1680	781	390	152
2	175	152	177	189	157	161	223	416	1620	758	529	147
3	175	154	174	179	154	170	232	415	1500	711	507	138
4	170	155	174	177	152	157	209	396	1310	682	439	137
5	177	155	175	175	144	144	206	366	1190	656	392	138
6	190	156	169	175	143	156	209	388	1270	648	348	135
7	192	166	175	172	147	162	229	507	1260	648	317	134
8	184	181	168	162	174	167	281	759	1300	623	283	133
9	183	210	154	167	187	194	314	1070	1280	581	256	135
10	186	216	178	173	194	212	286	1340	1210	544	251	136
11	185	221	164	178	172	219	267	1440	1250	551	253	135
12	181	223	160	160	168	228	251	1400	1430	622	339	135
13	179	210	176	150	156	238	242	1170	1300	837	385	157
14	178	223	180	158	150	236	246	1060	1220	668	332	166
15	177	232	178	160	146	207	275	928	1280	557	293	159
16	169	212	173	154	142	208	321	825	1490	487	297	156
17	168	195	158	156	156	223	373	747	1710	442	273	152
18	168	209	153	158	164	203	444	718	1460	401	262	148
19	167	197	161	160	155	210	531	971	1510	367	252	148
20	169	173	191	155	155	211	597	1180	1470	348	301	149
21	167	168	193	160	156	194	771	1490	1380	327	324	162
22	164	177	178	162	156	193	910	1460	1070	317	271	164
23	161	208	171	166	154	196	951	1770	923	332	233	156
24	160	211	170	173	161	205	1040	1870	819	442	211	150
25	160	209	177	165	164	217	1010	1830	854	448	194	145
26	158	199	179	165	176	235	980	1410	857	515	199	139
27	155	179	188	150	169	239	893	1330	829	442	186	137
28	155	173	144	158	162	228	706	1510	844	422	177	138
29	153	194	145	163	---	247	579	1770	843	539	167	148
30	154	181	181	165	---	241	517	1990	811	547	161	148
31	154	---	199	165	---	210	---	1830	---	443	156	---
TOTAL	5286	5691	5345	5141	4472	6271	14329	34810	36970	16686	8978	4377
MEAN	171	190	172	166	160	202	478	1123	1232	538	290	146
MAX	192	232	199	191	194	247	1040	1990	1710	837	529	166
MIN	153	152	144	150	142	144	206	366	811	317	156	133
AC-FT	10480	11290	10600	10200	8870	12440	28420	69050	73330	33100	17810	8680

CAL YR 1988 TOTAL 152623 MEAN 417 MAX 2610 MIN 140 AC-FT 302700
WTR YR 1989 TOTAL 148356 MEAN 406 MAX 1990 MIN 133 AC-FT 294300

09070500 COLORADO RIVER NEAR DOTSERO, CO

LOCATION.--Lat 39°38'38", long 107°04'38", in NW¼SE¼ sec.6, T.5 S., R.86 W., Eagle County, Hydrologic Unit 14010001, on left bank about 500 ft south of Interstate Highway 70, 1.5 mi west of Dotsero, and 1.5 mi downstream from Eagle River.

DRAINAGE AREA.--4,394 mi².

PERIOD OF RECORD.--October 1940 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,130 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 11, 12, and Dec. 18 to Feb. 25. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power development, diversions for irrigation of 68,000 acres upstream from station, and return flow from irrigated areas.

AVERAGE DISCHARGE.--49 years, 2,138 ft³/s; 1,549,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,200 ft³/s, May 25, 1984, gage height, 14.20 ft; minimum daily, 350 ft³/s, Jan. 5, 1944.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,420 ft³/s at 1000 May 24, gage height, 5.46 ft; minimum daily, 690 ft³/s, Feb. 5, 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1040	851	905	920	850	860	1170	2050	3420	1710	1540	1380
2	993	849	904	900	800	884	1120	1910	3250	1620	1590	1420
3	989	869	922	900	760	899	1080	1930	3050	1530	1680	1390
4	996	892	948	900	700	840	1030	1930	2840	1480	1570	1370
5	1030	891	888	900	690	704	1060	1880	2720	1390	1440	1380
6	1060	916	824	860	690	782	1070	1820	2690	1380	1350	1370
7	1050	893	870	840	740	814	1150	1950	2600	1530	1400	1340
8	1050	904	849	840	790	840	1500	2330	2500	1620	1410	1310
9	1060	983	856	880	880	947	1790	2920	2570	1650	1380	1310
10	1060	1010	898	900	880	1030	1690	3370	2480	1600	1510	1310
11	1060	981	920	880	840	1050	1540	3620	2610	1650	1620	1310
12	1040	949	920	870	820	1100	1450	3680	2730	1700	1670	1280
13	975	913	926	890	840	1140	1430	3350	2640	1890	1690	1260
14	970	953	907	920	820	1130	1430	3060	2540	1730	1630	1290
15	982	1020	940	960	820	998	1550	2920	2500	1510	1590	1250
16	964	961	885	1000	820	1010	1730	2730	2590	1330	1610	1170
17	946	931	852	980	860	1100	1920	2530	2780	1290	1570	1090
18	950	940	890	940	820	1030	2200	2390	2580	1300	1560	1100
19	941	932	900	920	790	1090	2470	2660	2620	1330	1530	1200
20	931	905	940	940	790	1070	2600	2950	2550	1450	1570	1340
21	877	848	940	960	810	973	2870	3460	2440	1500	1600	1410
22	837	875	920	940	820	964	3150	3560	2390	1580	1540	1420
23	876	977	920	900	820	1010	3280	3940	2230	1700	1500	1360
24	869	966	900	860	840	1080	3400	4100	2140	1840	1480	1290
25	871	979	920	860	860	1210	3450	3980	2130	1900	1470	1290
26	880	965	920	800	888	1460	3400	3400	2090	1850	1500	1280
27	868	924	900	860	882	1500	3180	3180	2030	1760	1510	1290
28	862	907	840	850	857	1390	2830	3290	1910	1640	1490	1280
29	854	985	880	840	---	1400	2470	3650	1810	1760	1480	1280
30	860	938	920	840	---	1400	2250	3940	1770	1970	1430	1230
31	854	---	940	830	---	1180	---	3700	---	1690	1390	---
TOTAL	29595	27907	27944	27680	22777	32890	61260	92180	75200	49880	47300	39000
MEAN	955	930	901	893	813	1061	2042	2974	2507	1609	1526	1300
MAX	1060	1020	948	1000	888	1500	3450	4100	3420	1970	1690	1420
MIN	837	848	824	800	690	704	1030	1820	1770	1290	1350	1090
AC-FT	58700	55350	55430	54900	45180	65240	121500	182800	149200	98940	93820	77360

CAL YR 1988 TOTAL 623678 MEAN 1704 MAX 6030 MIN 824 AC-FT 1237000
WTR YR 1989 TOTAL 533613 MEAN 1462 MAX 4100 MIN 690 AC-FT 1058000

09071300 GRIZZLY CREEK NEAR GLENWOOD SPRINGS, CO

LOCATION.--Lat 39°43'00", long 107°18'35", in NE¼SW¼ sec.7, T.4 S., R.88 W., Garfield County, Hydrologic Unit 14010001, on left bank 0.5 mi west of Grizzly Cow Camp and 14 mi north of Glenwood Springs.

DRAINAGE AREA.--5.73 mi².

PERIOD OF RECORD.--September 1976 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 10,435 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 19, 1978, at site 600 ft upstream, at datum, 25.33 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 4, 5, 7, 9-12, 15, Feb. 5 to Apr. 16, May 2-5, 7, 9, 10, and May 12-14. Records good except for estimated daily discharges, which are fair. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--13 years, 14.4 ft³/s; 10,430 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 364 ft³/s, June 5, 1986, gage height, 4.99 ft, maximum gage height observed, 8.63 ft, May 4, 1982 (backwater from ice); no flow many days most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 85 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 2	2300	---	*a8.43	May 30	0100	*171	4.60
May 24	2300	137	4.43				

No flow many days.
a Backwater from ice.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	.91	.70	.21	.09	.00	.00	8.5	133	6.4	2.3	1.3
2	1.4	.91	.68	.22	.09	.00	.00	11	121	5.5	2.5	1.4
3	1.4	.91	.66	.24	.09	.00	.00	14	111	5.5	2.5	1.4
4	1.4	.92	.65	.24	.10	.00	.00	13	84	5.1	2.3	1.4
5	1.4	.90	.61	.24	.06	.00	.00	12	68	4.9	2.2	1.4
6	1.4	.87	.58	.24	.00	.00	.00	12	73	4.7	2.2	1.3
7	1.5	.92	.56	.24	.00	.00	.00	27	66	4.2	2.1	1.3
8	1.4	.82	.56	.24	.00	.00	.00	32	61	4.1	2.0	1.5
9	1.4	.92	.52	.24	.00	.00	.00	40	61	3.0	2.1	1.5
10	1.4	.94	.51	.22	.00	.00	.00	42	62	2.7	2.1	1.7
11	1.4	.96	.42	.21	.00	.00	.00	43	69	3.2	2.1	1.3
12	1.3	1.0	.38	.21	.00	.00	.00	42	60	3.8	2.1	1.3
13	1.4	.97	.38	.18	.00	.00	.00	41	49	3.4	2.3	1.6
14	1.4	.91	.38	.18	.00	.00	.00	39	42	3.1	2.2	1.4
15	1.4	1.0	.38	.16	.00	.00	.00	39	39	3.0	2.1	1.4
16	1.3	.97	.38	.16	.00	.00	.00	33	37	2.7	2.0	1.3
17	1.3	.96	.38	.15	.00	.00	.11	38	35	2.3	1.9	1.2
18	1.1	.91	.38	.13	.00	.00	.19	49	29	2.4	2.1	1.1
19	1.1	.89	.38	.13	.00	.00	.31	53	26	2.5	2.1	1.2
20	1.1	.84	.38	.13	.00	.00	.51	68	22	2.6	2.1	1.6
21	1.1	.81	.38	.11	.00	.00	.80	110	19	2.6	2.1	1.5
22	1.1	.75	.38	.10	.00	.00	1.1	126	17	2.8	1.9	1.1
23	1.0	.75	.38	.10	.00	.00	1.5	122	15	3.2	1.8	1.1
24	.99	.75	.37	.10	.00	.00	2.1	124	14	2.6	1.6	.99
25	1.0	.75	.35	.10	.00	.00	2.8	124	12	2.8	1.6	.97
26	1.1	.74	.35	.10	.00	.00	3.2	102	10	2.9	1.5	.97
27	.97	.70	.27	.10	.00	.00	3.7	94	10	2.9	1.4	.97
28	.92	.70	.18	.10	.00	.00	4.2	110	9.0	2.6	1.4	.97
29	.85	.70	.18	.09	---	.00	4.7	127	8.7	2.6	1.5	.97
30	.84	.70	.19	.09	---	.00	5.6	152	7.2	2.4	1.5	.97
31	.93	---	.21	.09	---	.00	---	148	---	2.4	2.0	---
TOTAL	37.80	25.78	13.11	5.05	0.43	0.00	30.82	1995.5	1369.9	104.9	61.6	38.11
MEAN	1.22	.86	.42	.16	.015	.00	1.03	64.4	45.7	3.38	1.99	1.27
MAX	1.5	1.0	.70	.24	.10	.00	5.6	152	133	6.4	2.5	1.7
MIN	.84	.70	.18	.09	.00	.00	.00	8.5	7.2	2.3	1.4	.97
AC-FT	75	51	26	10	.9	.0	61	3960	2720	208	122	76

CAL YR 1988 TOTAL 3191.38 MEAN 8.72 MAX 155 MIN .00 AC-FT 6330
WTR YR 1989 TOTAL 3683.00 MEAN 10.1 MAX 152 MIN .00 AC-FT 7310

09071750 COLORADO RIVER ABOVE GLENWOOD SPRINGS, CO

LOCATION.--Lat 39°33'38", long 107°17'59", Garfield County, Hydrologic Unit 14010001, 100 yards downstream of No Name Creek and two miles above Glenwood Springs.

DRAINAGE AREA.--4,556 mi².

PERIOD OF RECORD.--December 1985 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1985 to current year.
WATER TEMPERATURE: December 1985 to current year.

INSTRUMENTATION.--Water-quality monitor since December 1985.

REMARKS.--Discharge obtained by subtracting the flow in Roaring Fork River at Glenwood Springs (station 09085000) from the flow in the Colorado River below Glenwood Springs (station 09085100). Water-quality data collection was moved downstream to this site from previous site 09071100 on Dec. 12, 1985. Water-quality data collected at this site are considered equivalent to data collected at old site. Daily maximum and minimum specific-conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 878 microsiemens Dec. 1, 1987; minimum, 228 microsiemens June 10, 1986.
WATER TEMPERATURE: Maximum, 22.5°C July 26, 1987; minimum, 0.0°C on many days during winters.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 800 microsiemens Nov. 1, 19 (may have been exceeded during periods of missing record); minimum recorded, 270 microsiemens May 12.
WATER TEMPERATURE: Maximum 21.9°C July 6; minimum, 0.0°C on many days during winter.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO
OCT											
07...	1115	E1050	770	8.1	11.5	210	100	63	13	68	2
NOV											
09...	1300	E1110	780	8.1	5.0	220	100	64	14	75	2
DEC											
14...	0950	E860	802	8.2	0.0	200	87	60	13	74	2
MAR											
23...	1000	E1050	859	8.0	7.0	220	100	63	16	77	2
APR											
29...	0850	E2630	443	7.9	9.5	140	52	42	9.7	30	1
MAY											
17...	1215	E2910	390	8.2	10.0	140	47	39	9.2	26	1
JUN											
07...	0935	E2850	420	7.9	11.5	140	52	42	9.5	28	1
28...	1400	E2030	538	8.3	16.5	170	70	51	11	40	1
JUL											
26...	0955	E1800	536	8.3	17.5	170	74	54	9.7	41	1
AUG											
25...	0945	E1670	540	8.2	17.0	160	63	48	9.1	47	2

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
OCT										
07...	3.0	109	110	100	0.30	8.3	431	0.59	0.0	<0.10
NOV										
09...	2.6	115	120	110	0.30	9.5	464	0.63	0.0	<0.10
DEC										
14...	2.7	117	110	110	0.20	10	451	0.61	0.0	0.14
MAR										
23...	3.6	121	140	110	0.30	9.8	493	0.67	0.0	0.15
APR										
29...	2.1	93	63	36	0.20	10	249	0.34	0.0	0.14
MAY										
17...	1.7	88	57	31	0.20	8.8	226	0.31	0.0	<0.10
JUN										
07...	1.5	92	58	34	0.20	7.9	236	0.32	0.0	<0.10
28...	2.1	103	83	52	0.20	7.8	309	0.42	0.0	<0.10
JUL										
26...	4.2	101	87	53	0.30	9.8	320	0.43	0.0	<0.10
AUG										
25...	2.6	95	80	68	0.30	7.8	320	0.43	0.0	<0.10

E Estimated.

09071750 COLORADO RIVER ABOVE GLENWOOD SPRINGS, CO--Continued

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	705	412	391	454	---	---
2	---	---	---	---	---	---	707	434	393	470	---	---
3	---	785	---	---	---	---	686	444	393	486	---	---
4	---	770	---	---	---	---	703	436	391	506	---	---
5	---	772	---	---	---	---	741	437	391	525	---	---
6	---	754	---	---	---	---	761	442	393	548	---	---
7	---	760	---	---	---	---	757	440	405	577	---	---
8	---	766	---	---	---	---	708	409	452	601	---	---
9	---	764	---	---	---	---	652	344	463	614	---	---
10	---	755	---	---	---	---	612	302	453	643	---	---
11	---	751	---	---	---	---	582	279	451	637	---	---
12	---	759	---	---	---	---	596	276	450	625	---	---
13	---	783	---	---	---	---	597	284	437	591	---	---
14	---	779	---	---	---	---	595	313	442	529	---	---
15	---	764	---	---	---	---	599	330	455	539	---	---
16	---	751	---	---	---	---	579	348	446	552	---	---
17	---	774	---	---	---	---	553	377	411	566	---	---
18	---	763	---	---	---	---	525	424	386	575	---	---
19	---	778	---	---	---	---	478	439	401	588	---	---
20	---	756	---	---	---	---	436	433	401	613	---	---
21	---	---	---	---	---	---	399	418	405	625	---	---
22	---	---	---	---	---	---	364	404	408	---	---	---
23	---	---	---	---	---	---	342	395	413	---	---	---
24	---	---	---	---	---	---	330	387	416	---	---	---
25	---	---	---	---	---	---	322	386	416	---	---	---
26	---	---	---	---	---	---	320	378	422	---	---	---
27	---	---	---	---	---	---	328	376	427	---	---	---
28	---	---	---	---	---	690	342	373	432	---	---	---
29	---	---	---	---	---	693	368	375	441	---	---	---
30	---	---	---	---	---	696	391	390	449	---	---	---
31	---	---	---	---	---	697	---	396	---	---	---	---
MEAN	---	---	---	---	---	---	536	383	421	---	---	---

09071750 COLORADO RIVER ABOVE GLENWOOD SPRINGS, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.1	10.2	---	---	.9	.0	.4	.0	.4	.0	2.4	1.2
2	12.5	10.4	6.5	5.5	.4	.0	.1	.0	.4	.0	1.5	.6
3	---	---	6.7	6.0	.4	.0	.4	.0	.4	.0	2.0	.7
4	---	---	6.6	5.5	.4	.0	.1	.0	.4	.0	2.6	.7
5	---	---	---	---	.4	.0	.4	.0	.4	.0	1.9	1.2
6	---	---	---	---	.4	.0	.4	.0	.1	.0	1.8	.4
7	10.9	10.0	---	---	.3	.0	.1	.0	.4	.0	1.8	.2
8	11.4	9.9	5.2	4.5	.9	.0	.1	.0	.4	.0	2.6	.0
9	---	---	4.7	4.0	.4	.0	.4	.0	.4	.0	2.9	1.1
10	---	---	4.6	3.6	.4	.0	.4	.0	.4	.0	3.8	1.5
11	---	---	3.6	2.8	.4	.0	.4	.0	.4	.0	4.8	2.4
12	---	---	2.8	1.8	.6	.0	.4	.0	.4	.0	4.5	2.8
13	---	---	3.5	2.4	.4	.0	.4	.0	.1	.0	4.1	2.9
14	---	---	4.9	3.7	.4	.0	.4	.0	.1	.0	4.3	3.3
15	---	---	4.4	2.6	.5	.0	.4	.0	.4	.0	4.5	3.1
16	---	---	2.5	1.1	.4	.0	.4	.0	.4	.0	3.5	2.0
17	---	---	1.8	.6	.2	.0	.4	.0	.4	.0	4.6	2.0
18	---	---	.9	.1	.4	.0	.4	.0	.4	.0	5.4	3.2
19	---	---	.9	.0	.4	.0	.1	.0	.4	.0	4.4	3.4
20	---	---	.4	.0	.4	.0	.4	.0	.3	.0	4.8	3.6
21	---	---	.4	.0	.4	.0	.4	.0	.9	.2	4.8	3.3
22	---	---	.4	.0	.4	.0	.4	.0	1.1	.0	6.4	3.9
23	---	---	1.2	.0	.1	.0	.4	.0	1.3	.2	---	---
24	---	---	2.0	1.2	.4	.0	.4	.0	1.4	.0	---	---
25	---	---	1.3	.5	.1	.0	.4	.0	1.4	.2	---	---
26	---	---	1.0	.0	.3	.0	.1	.0	1.6	.3	---	---
27	---	---	.1	.0	.4	.0	.4	.0	2.0	.5	---	---
28	---	---	.4	.0	.4	.0	.4	.0	2.0	.9	6.8	5.4
29	---	---	.9	.0	.1	.0	.1	.0	---	---	7.9	6.4
30	---	---	.6	.0	.4	.0	.4	.0	---	---	6.7	4.8
31	---	---	---	---	.4	.0	.1	.0	---	---	6.3	4.8
MONTH	---	---	---	---	.9	.0	.4	.0	2.0	.0	---	---

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.2	4.9	8.0	6.6	12.6	10.3	18.3	16.8	20.4	19.0	16.4	15.0
2	5.6	4.9	9.8	7.8	12.8	10.8	18.5	16.8	19.4	18.2	16.2	15.0
3	6.9	5.3	9.9	8.9	12.6	10.4	19.3	17.0	18.4	18.0	16.4	15.0
4	7.2	4.8	10.0	8.9	11.2	10.1	20.2	17.5	18.4	18.0	16.0	14.0
5	7.6	4.9	10.3	8.5	13.2	10.3	20.7	18.3	19.0	18.0	16.0	15.0
6	8.5	5.4	12.1	10.2	13.5	12.2	21.9	18.7	19.2	18.0	16.4	14.2
7	10.0	7.2	13.1	11.6	13.4	11.3	21.6	19.3	19.0	17.2	16.0	15.0
8	10.2	8.7	12.9	12.0	13.6	12.1	20.8	18.8	19.0	17.2	16.2	14.2
9	9.5	7.9	12.8	11.4	12.4	10.9	20.2	18.5	18.4	17.2	15.0	13.0
10	7.8	6.6	12.5	10.5	12.8	11.4	20.7	18.8	19.2	17.4	14.4	13.0
11	7.4	6.6	10.7	9.2	13.1	12.0	19.9	18.7	19.0	18.2	14.0	12.0
12	7.7	6.1	10.0	8.9	13.2	12.2	19.5	18.0	18.4	17.0	13.2	11.2
13	8.7	7.6	9.9	8.0	13.4	11.5	18.3	17.3	18.2	17.0	12.4	11.2
14	9.6	8.5	9.9	8.5	14.7	12.6	18.8	17.7	18.4	17.0	13.2	12.0
15	10.4	9.2	8.9	7.7	15.4	13.7	19.2	17.5	18.0	17.0	13.2	12.2
16	10.7	9.8	10.2	8.2	16.0	14.9	19.7	17.9	13.2	17.0	14.0	12.0
17	10.7	9.8	10.4	9.0	15.9	14.9	19.9	18.0	17.4	16.0	14.2	13.0
18	10.7	9.4	11.9	10.1	16.1	14.4	20.2	18.0	17.2	16.0	15.2	13.0
19	10.8	9.9	12.9	11.4	16.2	15.4	20.8	18.9	17.2	16.0	15.0	13.0
20	11.0	9.3	12.9	10.8	16.2	15.1	21.3	19.7	16.4	16.0	15.2	14.0
21	10.9	9.9	12.5	10.9	15.5	12.5	21.5	20.2	16.4	15.0	15.0	13.0
22	10.7	9.3	12.2	10.2	12.4	11.0	21.2	19.0	16.4	15.0	14.2	13.0
23	10.3	8.2	12.3	10.7	13.4	12.6	19.4	18.2	17.0	16.0	14.2	12.0
24	10.4	8.7	11.6	9.9	14.5	13.1	19.0	18.0	17.4	16.0	14.2	12.2
25	10.2	9.0	11.6	9.6	15.4	14.8	18.4	17.0	16.4	15.4	14.2	12.0
26	9.9	8.7	10.7	8.2	16.2	15.1	17.4	17.0	16.2	15.0	14.2	12.0
27	9.0	7.2	11.6	9.5	16.5	15.6	18.4	18.0	16.2	15.0	14.2	13.0
28	7.1	6.0	12.6	10.4	16.8	15.8	20.0	19.0	16.4	15.0	14.2	13.0
29	6.6	5.4	12.7	11.1	17.3	16.1	20.2	19.0	16.4	15.2	15.0	13.0
30	7.3	5.7	12.7	11.1	18.0	16.6	19.0	18.0	16.4	15.0	15.0	13.0
31	---	---	12.2	10.3	---	---	20.0	18.2	16.4	15.2	---	---
MONTH	11.0	4.8	13.1	6.6	18.0	10.1	21.9	16.8	20.4	15.0	16.4	11.2

09073300 ROARING FORK RIVER ABOVE DIFFICULT CREEK NEAR ASPEN, CO

LOCATION.--Lat 39°08'28", long 106°46'25", Pitkin County, Hydrologic Unit 14010004, on left bank in the White River National Forest at Difficult Creek Campground, 0.45 mi above Difficult Creek tributary and 4.25 mi southeast of Aspen.

DRAINAGE AREA.--75.8 mi^2.

PERIOD OF RECORD.--October 1979 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,120 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 19-22, 27-29, Dec. 9, 23, 24, 27-31, Jan. 7-15, Feb. 5-11, and Mar. 5. Records good except for estimated daily discharges, which are poor. Transmountain diversion 11 mi upstream through Twin Lakes Tunnel to Arkansas River basin since May 24, 1935 (37,230 acre-ft diverted, during current year, provided by U.S. Bureau of Reclamation). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--10 years, 133 ft^3/s; 96,360 acre-ft/yr, including diversion by Twin Lakes tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,350 ft^3/s, June 8, 1985, gage height, 5.10 ft, from rating curve extended above 910 ft^3/s; minimum daily, 8.0 ft^3/s, Jan. 11, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 251 ft^3/s at 0100 May 30, gage height, 2.57 ft, maximum gage height, 3.55 ft (backwater from ice); minimum daily discharge, 9.0 ft^3/s, Feb. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	17	17	17	15	13	21	41	161	61	38	35
2	31	18	17	17	15	13	19	39	152	60	42	35
3	31	18	16	17	15	13	20	37	138	56	39	33
4	31	17	16	17	15	13	18	37	108	54	37	32
5	31	16	16	17	13	11	20	36	100	52	36	32
6	31	17	16	17	11	13	21	42	108	50	37	35
7	31	19	16	15	9.0	13	25	53	107	49	35	35
8	32	16	16	13	10	13	30	74	114	46	34	35
9	32	16	14	14	12	13	31	100	105	45	33	36
10	32	14	16	16	14	14	28	123	102	43	33	35
11	30	17	16	15	15	15	28	128	103	43	34	33
12	30	14	16	13	15	15	25	115	104	43	40	31
13	30	17	16	12	15	15	25	92	99	42	38	37
14	28	17	17	13	15	14	28	88	97	40	40	35
15	27	16	17	15	14	15	33	76	102	39	38	35
16	30	14	16	16	14	15	41	70	122	37	34	33
17	30	15	16	16	14	15	48	64	136	35	33	31
18	31	16	17	16	14	15	53	65	120	34	33	30
19	28	14	17	16	15	15	57	85	124	32	32	30
20	27	13	17	16	15	15	62	118	118	31	32	39
21	24	16	17	16	15	15	76	150	108	30	31	39
22	21	19	17	16	15	15	80	167	90	29	29	34
23	20	20	16	16	15	15	84	194	81	33	31	32
24	20	20	17	16	15	16	88	202	74	39	38	33
25	20	20	17	16	15	17	87	178	72	38	38	36
26	19	19	17	15	15	19	84	136	71	38	37	37
27	19	19	16	15	14	20	71	144	68	36	35	37
28	17	20	13	15	14	21	57	177	65	36	35	37
29	17	19	15	15	---	23	50	206	65	45	34	36
30	18	17	16	15	---	20	45	216	64	41	33	37
31	18	---	17	15	---	21	---	181	---	38	35	---
TOTAL	817	510	503	478	393.0	480	1355	3434	3078	1295	1094	1035
MEAN	26.4	17.0	16.2	15.4	14.0	15.5	45.2	111	103	41.8	35.3	34.5
MAX	32	20	17	17	15	23	88	216	161	61	42	39
MIN	17	13	13	12	9.0	11	18	36	64	29	29	30
AC-FT	1620	1010	998	948	780	952	2690	6810	6110	2570	2170	2050

CAL YR 1988 TOTAL 16685 MEAN 45.6 MAX 319 MIN 13 AC-FT 33090
WTR YR 1989 TOTAL 14472.0 MEAN 39.6 MAX 216 MIN 9.0 AC-FT 28710

09073400 ROARING FORK RIVER NEAR ASPEN, CO

LOCATION.--Lat 39°10'48", long 106°48'05", Pitkin County, Hydrologic Unit 14010004, on right bank 25 ft upstream from private bridge, 115 ft upstream from Salvation ditch headgate, 1.0 mi southeast of Aspen, and 2.0 mi upstream from Hunter Creek.

DRAINAGE AREA.--108 mi^2.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 8,014.01 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 25, 1968, at site 85 ft upstream, at datum 1.16 ft, higher.

REMARKS.--Estimated daily discharges: Dec. 16-18, and Jan. 2 to Mar. 1. Records good except for estimated daily discharges, which are poor. Transmountain diversion 14 mi upstream through Twin Lakes tunnel to Arkansas River basin since May 24, 1935 (37,230 acre-ft diverted, during current year, provided by U.S. Bureau of Reclamation). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--25 years, 148 ft^3/s; 107,200 acre-ft/yr, including diversion by Twin Lakes tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,230 ft^3/s, June 9, 1985, gage height, 5.29 ft; minimum daily, 12 ft^3/s, Nov. 28, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 447 ft^3/s at 0200 May 30, gage height, 2.47 ft; minimum daily, 22 ft^3/s, Feb. 5, 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	32	32	35	36	35	41	74	305	112	70	53
2	43	34	33	33	35	25	38	72	306	107	83	53
3	43	36	32	35	34	25	38	68	286	101	74	51
4	43	34	33	34	30	25	35	67	235	95	66	50
5	44	31	32	37	22	23	35	65	228	91	63	49
6	48	32	34	35	22	25	37	73	260	86	59	53
7	48	37	33	30	23	26	42	95	255	83	54	54
8	49	33	36	29	23	26	50	133	269	80	53	55
9	50	33	35	29	35	27	53	186	235	76	51	60
10	47	32	33	37	40	29	47	210	227	74	52	57
11	47	36	32	37	40	31	48	211	232	74	54	55
12	45	32	32	29	37	31	43	194	242	80	67	52
13	45	35	32	25	36	30	42	164	222	76	62	65
14	43	36	31	29	33	30	47	160	225	72	63	62
15	39	36	31	36	32	28	51	137	242	72	60	62
16	45	31	31	32	29	29	62	127	279	68	54	56
17	45	30	30	33	36	31	72	117	287	62	52	53
18	45	33	31	33	37	29	82	122	258	60	52	50
19	44	28	32	34	36	30	90	160	262	56	52	48
20	43	26	30	33	36	30	98	215	238	53	52	67
21	39	31	31	34	34	29	124	263	217	52	50	69
22	35	30	31	34	33	30	130	284	174	51	49	57
23	34	36	30	36	37	31	138	329	154	56	48	53
24	34	38	31	36	44	31	151	347	148	71	55	53
25	34	37	32	36	54	33	148	315	145	71	55	59
26	34	33	30	30	55	36	147	261	135	74	54	59
27	34	33	30	30	51	38	129	277	128	66	53	59
28	32	36	34	35	45	38	103	327	124	71	53	59
29	32	34	32	35	---	41	88	361	123	83	53	58
30	33	33	34	32	---	37	81	378	118	79	53	57
31	32	---	37	35	---	35	---	320	---	68	53	---
TOTAL	1270	998	997	1028	1005	944	2290	6112	6559	2320	1769	1688
MEAN	41.0	33.3	32.2	33.2	35.9	30.5	76.3	197	219	74.8	57.1	56.3
MAX	50	38	37	37	55	41	151	378	306	112	83	69
MIN	32	26	30	25	22	23	35	65	118	51	48	48
AC-FT	2520	1980	1980	2040	1990	1870	4540	12120	13010	4600	3510	3350

CAL YR 1988 TOTAL 27124 MEAN 74.1 MAX 425 MIN 25 AC-FT 53800
WTR YR 1989 TOTAL 26980 MEAN 73.9 MAX 378 MIN 22 AC-FT 53510

09074000 HUNTER CREEK NEAR ASPEN, CO

LOCATION.--Lat 39°12'21", long 106°47'49", Pitkin County, Hydrologic Unit 14010004, on right bank 280 ft upstream from headgate of Red Mountain ditch, 1.5 mi upstream from mouth, and 1.5 mi northeast of Aspen.

DRAINAGE AREA.--41.1 mi^2.

PERIOD OF RECORD.--June 1950 to September 1956, September 1969 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,610 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 1, 1969, at site 220 ft downstream, at different datum.

REMARKS.--Estimated daily discharges: Nov. 16-25, and Nov. 27 to Mar. 28. Records fair except for estimated daily discharges, which are poor. Transmountain diversion upstream from station to Charles H. Boustead tunnel by feeder conduit. Several small diversions upstream from station for irrigation of hay meadows upstream from and downstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--16 years (water years 1951-1956, 1970-1979), 50.7 ft^3/s; 36,730 acre-ft/yr, prior to diversion through Charles H. Boustead Tunnel; 10 years (water years 1980-89), 45.8 ft^3/s; 33,180 acre-ft/yr, subsequent to diversions through Charles H. Boustead Tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,170 ft^3/s, June 8, 1985, gage height, 2.33 ft; from rating curve extended above 300 ft^3/s, maximum gage height, 4.30 ft, Nov. 30, 1984 (backwater from ice); minimum daily discharge, 1.8 ft^3/s, Dec. 20-22, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 454 ft^3/s at 2300 May 29, gage height, 1.57 ft; minimum daily, 4.1 ft^3/s, Oct. 28, 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	4.3	5.4	6.2	6.6	6.4	10	38	123	51	42	7.6
2	6.1	4.9	5.3	6.0	6.4	6.4	9.6	36	110	48	54	7.2
3	5.7	5.4	5.3	6.2	6.2	6.4	10	35	95	47	45	6.6
4	5.5	5.3	5.8	6.0	5.8	6.2	9.7	35	86	47	34	6.5
5	6.2	4.6	5.7	6.4	5.0	4.8	8.7	34	81	47	33	6.6
6	8.4	4.6	6.0	6.2	5.0	6.0	9.2	51	81	45	27	6.0
7	10	6.4	7.2	5.6	5.2	6.2	13	82	72	44	24	5.8
8	11	5.5	6.0	5.6	5.2	8.6	19	106	81	42	23	5.9
9	11	5.2	5.8	5.6	6.4	11	21	118	77	41	21	7.4
10	9.2	5.3	6.2	6.4	7.0	13	18	132	72	38	25	7.9
11	9.0	5.3	6.4	6.4	7.0	14	17	124	74	37	25	8.5
12	8.9	7.7	6.0	5.6	6.6	13	16	110	75	39	30	9.4
13	9.0	6.5	6.6	5.0	6.6	13	14	96	75	41	30	14
14	9.1	6.7	6.6	5.4	6.4	12	17	93	75	39	28	13
15	9.2	6.9	6.8	6.2	6.2	10	22	80	70	35	25	14
16	8.6	5.3	6.0	5.8	5.8	10	26	78	82	31	22	12
17	8.3	5.9	5.6	6.0	6.4	10	31	76	81	29	19	11
18	8.2	5.2	6.2	6.0	6.6	9.4	39	89	70	28	23	9.2
19	6.5	5.0	7.0	6.2	6.4	10	48	109	72	25	22	9.0
20	6.7	5.2	6.8	6.0	6.4	9.4	62	119	69	22	23	14
21	7.2	5.7	6.4	6.2	6.2	8.6	89	128	65	22	19	16
22	6.3	5.9	6.3	6.2	6.0	9.0	97	136	59	23	16	11
23	6.2	6.2	6.6	6.4	6.4	9.4	97	125	56	29	14	9.4
24	6.1	6.1	6.4	6.4	7.0	10	95	127	55	59	13	8.8
25	5.8	6.0	6.6	6.4	8.0	12	97	114	53	61	12	7.7
26	5.5	6.1	6.2	5.8	8.0	12	94	105	54	54	11	7.6
27	5.2	5.8	5.8	5.8	7.2	11	81	116	54	44	10	6.9
28	4.1	5.2	5.2	6.4	5.6	11	60	169	54	49	10	6.8
29	4.1	6.0	5.6	6.4	---	12	49	230	54	85	9.0	6.5
30	5.8	5.8	6.0	6.2	---	12	44	195	54	78	8.6	6.4
31	6.0	---	6.2	6.4	---	13	---	135	---	49	8.6	---
TOTAL	225.4	170.0	190.0	187.4	177.6	305.8	1223.2	3221	2179	1329	706.2	268.7
MEAN	7.27	5.67	6.13	6.05	6.34	9.86	40.8	104	72.6	42.9	22.8	8.96
MAX	11	7.7	7.2	6.4	8.0	14	97	230	123	85	54	16
MIN	4.1	4.3	5.2	5.0	5.0	4.8	8.7	34	53	22	8.6	5.8
AC-FT	447	337	377	372	352	607	2430	6390	4320	2640	1400	533

CAL YR 1988 TOTAL 16702.5 MEAN 45.6 MAX 786 MIN 4.1 AC-FT 33130
WTR YR 1989 TOTAL 10183.3 MEAN 27.9 MAX 230 MIN 4.1 AC-FT 20200

09074800 CASTLE CREEK ABOVE ASPEN, CO

LOCATION.--Lat 39°05'15", long 106°48'42", Pitkin County, Hydrologic Unit 14010004, on right bank 0.4 mi downstream from Forest Service bridge, 0.4 mi upstream from Sandy Creek, and 7 mi south of Aspen.

DRAINAGE AREA.--32.2 mi.

PERIOD OF RECORD.--September 1969 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,100 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 26-28, Jan. 7-9, 12, 13, and Feb. 5-7. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--20 years, 43.7 ft³/s; 31,660 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 559 ft³/s, June 30, 1984, gage height, 3.64 ft; maximum gage height, 3.88 ft, June 23, 1970; minimum daily discharge, 6.0 ft³/s, Jan. 7, 1982.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
June 16	2330	*275	*2.63	No other peak greater than base discharge.			

Minimum daily discharge, 7.2 ft³/s, Feb. 6, 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	12	11	8.6	9.0	8.6	11	26	129	127	69	20
2	19	12	11	8.3	8.6	8.6	11	24	134	120	68	20
3	19	12	11	7.9	8.6	8.6	11	23	122	119	65	19
4	18	13	11	7.9	8.6	8.6	11	23	105	119	56	19
5	19	11	11	7.9	7.8	8.2	11	22	118	118	50	19
6	19	11	11	7.9	7.2	7.7	11	22	129	116	43	19
7	18	10	11	7.6	7.2	7.9	11	25	127	106	38	18
8	17	10	12	7.4	8.1	7.9	11	37	130	101	36	20
9	17	11	12	7.6	8.5	8.1	11	68	114	96	34	20
10	17	11	12	7.9	8.6	8.6	11	85	120	91	36	20
11	16	11	11	7.9	8.3	8.6	11	74	121	86	54	20
12	16	11	11	7.6	7.9	8.6	11	64	124	101	58	22
13	15	12	11	7.6	8.3	8.6	11	57	119	92	46	23
14	15	12	11	7.9	8.4	9.6	12	57	121	88	41	22
15	14	12	11	7.9	8.5	10	12	49	144	77	38	21
16	14	12	11	7.9	8.4	10	12	42	191	72	38	20
17	13	12	11	8.0	8.5	10	14	38	193	68	34	20
18	13	12	11	8.0	8.5	10	17	38	186	64	35	21
19	13	12	11	8.3	8.6	10	19	52	198	64	33	20
20	13	12	11	8.6	8.6	10	23	73	184	63	31	26
21	13	12	11	9.2	8.6	10	34	96	159	61	29	27
22	12	13	11	9.2	8.6	11	49	108	104	59	27	25
23	12	13	11	9.3	8.6	11	49	126	95	65	26	25
24	12	13	11	9.3	8.4	11	53	123	105	108	25	24
25	13	12	11	9.3	8.0	11	52	116	128	87	24	23
26	13	12	9.8	9.2	8.6	11	47	95	124	87	23	23
27	13	11	8.0	9.2	8.6	11	41	106	125	72	22	23
28	11	11	7.8	9.3	8.5	11	34	124	131	91	22	22
29	11	11	7.9	9.3	---	11	30	134	132	89	22	21
30	11	11	8.2	9.2	---	11	28	153	129	71	21	21
31	11	---	8.6	9.2	---	11	---	130	---	63	21	---
TOTAL	456	350	328.3	260.4	234.1	298.2	669	2210	4041	2741	1165	643
MEAN	14.7	11.7	10.6	8.40	8.36	9.62	22.3	71.3	135	88.4	37.6	21.4
MAX	19	13	12	9.3	9.0	11	53	153	198	127	69	27
MIN	11	10	7.8	7.4	7.2	7.7	11	22	95	59	21	18
AC-FT	904	694	651	517	464	591	1330	4380	8020	5440	2310	1280

CAL YR 1988 TOTAL 11572.3 MEAN 31.6 MAX 215 MIN 6.5 AC-FT 22950
WTR YR 1989 TOTAL 13396.0 MEAN 36.7 MAX 198 MIN 7.2 AC-FT 26570

09075700 MAROON CREEK ABOVE ASPEN, CO

LOCATION.--Lat 39°07'25", long 106°54'17", Pitkin County, Hydrologic Unit 14010004, on left bank 0.3 mi upstream from Silver Queen Forest Service campground, 1.2 mi downstream from confluence of East and West Maroon Creeks, and 7.2 mi southwest of Aspen.

DRAINAGE AREA.--35.4 mi².

PERIOD OF RECORD.--September 1969 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,720 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 29 to to Apr. 6. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Natural regulation by Maroon Lake. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--20 years, 68.0 ft³/s; 49,270 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 836 ft³/s, June 22, 1980, gage height, 3.39 ft, from rating curve extended above 350 ft³/s, but may have been higher during a period of indefinite stage-discharge relationship in June, 1984; maximum gage height, 4.53 ft, Feb. 3, 1972 (backwater from ice); minimum daily discharge, 9.0 ft³/s, Mar. 29, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
June 19	0700	*286	*2.74	No other peak greater than base discharge.			

Minimum daily, 12 ft³/s, Mar. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	29	22	23	23	17	16	33	132	218	90	45
2	39	29	22	22	23	16	15	33	190	215	90	45
3	39	29	21	22	23	16	16	33	182	217	90	44
4	39	29	22	22	22	16	13	33	160	215	88	43
5	38	29	21	23	20	15	13	33	172	215	86	43
6	38	29	21	23	20	14	13	34	190	210	83	42
7	38	28	22	21	20	15	14	36	186	198	81	42
8	37	28	20	21	20	15	15	40	205	193	80	41
9	37	28	20	21	23	16	15	46	193	186	79	41
10	36	28	21	23	24	17	15	59	194	184	78	41
11	36	28	21	23	24	19	15	65	197	179	79	40
12	35	28	21	21	23	19	15	64	196	179	78	39
13	35	28	22	19	23	19	16	60	193	169	76	39
14	35	27	22	21	22	18	16	59	179	161	71	38
15	34	27	22	23	22	15	17	61	194	145	68	38
16	34	27	20	22	21	15	18	64	211	132	67	37
17	34	27	19	22	23	16	18	65	203	124	66	37
18	34	27	21	22	23	14	19	66	201	114	64	36
19	33	26	23	22	23	15	20	69	259	108	63	36
20	33	26	23	22	23	15	22	78	264	103	62	36
21	32	26	22	22	22	13	24	90	271	98	61	36
22	31	25	22	22	22	12	27	93	247	94	59	36
23	31	25	23	23	23	13	32	111	231	104	57	35
24	31	25	23	23	25	14	37	120	231	128	55	35
25	30	25	23	23	26	15	39	129	225	108	53	34
26	30	24	22	21	26	17	40	113	221	106	51	34
27	30	24	21	21	24	17	40	130	218	100	50	33
28	30	24	20	23	17	16	38	161	211	93	49	33
29	30	25	21	23	---	18	36	173	215	106	47	33
30	29	25	22	22	---	17	34	199	215	105	46	32
31	29	---	23	23	---	14	---	186	---	92	46	---
TOTAL	1057	805	668	684	630	488	668	2536	6236	4599	2113	1144
MEAN	34.1	26.8	21.5	22.1	22.5	15.7	22.3	81.8	208	148	68.2	38.1
MAX	40	29	23	23	26	19	40	199	271	218	90	45
MIN	29	24	19	19	17	12	13	33	160	92	46	32
AC-FT	2100	1600	1320	1360	1250	968	1320	5030	12370	9120	4190	2270

CAL YR 1988 TOTAL 19344 MEAN 52.9 MAX 256 MIN 14 AC-FT 38370
WTR YR 1989 TOTAL 21628 MEAN 59.3 MAX 271 MIN 12 AC-FT 42900

09076520 OWL CREEK NEAR ASPEN, CO

LOCATION.--Lat 39°13'25", long 106°52'45", in NE¼SE¼ sec.33, T.9 S., R.85 W., Pitkin County, Hydrologic Unit 14010004, on left bank 1.2 mi upstream from mouth and 3.8 mi northwest of Aspen.

DRAINAGE AREA.--6.60 mi².

PERIOD OF RECORD.--October 1974 to September 1989 (discontinued).

GAGE.--Water-stage recorder with V-notch concrete control. Elevation of gage is 7,870 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 19-23, Jan. 6-9, 12-14, and Jan. 20 to Mar. 28. Records good except for estimated daily discharges, which are poor. Several small diversions upstream from station for irrigation of hay meadows. Water imported upstream from station, at times, from West Willow Creek through Willow and Owl ditches. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--15 years, 3.03 ft³/s; 2,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90 ft³/s, May 21, 1984, gage height, 2.39 ft; no flow, Feb. 9 to Mar. 6, Sept. 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 29 ft³/s at 0530 May 11, gage height, 1.90 ft; minimum daily, 0.14 ft³/s, Feb. 4, 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	.22	.22	.31	.26	.43	2.4	7.6	2.0	.46	.61	.19
2	.21	.24	.22	.29	.25	.42	1.9	7.8	1.6	.61	.88	.18
3	.21	.24	.21	.27	.21	.43	1.7	7.5	1.5	.55	.84	.17
4	.20	.24	.21	.28	.14	.41	1.6	9.5	1.1	.45	.83	.16
5	.21	.24	.22	.30	.14	.37	1.9	9.3	.95	.44	.81	.16
6	.21	.23	.21	.25	.15	.49	3.4	9.5	.93	.43	.69	.15
7	.21	.21	.27	.25	.15	.50	5.3	12	.94	.54	.60	.15
8	.22	.21	.28	.24	.25	.74	5.2	15	1.1	.62	.45	.16
9	.22	.32	.27	.24	.30	.94	4.4	20	.95	.53	.43	.22
10	.22	.26	.27	.31	.30	1.2	3.3	22	.84	.46	.44	.22
11	.22	.25	.29	.31	.27	1.3	3.4	26	.84	.52	.72	.21
12	.23	.26	.27	.23	.26	1.2	3.1	23	1.1	.64	1.2	.25
13	.21	.29	.28	.19	.24	1.2	2.6	19	1.7	.68	1.0	.38
14	.24	.31	.29	.23	.23	1.1	2.9	20	.91	.62	.71	.27
15	.28	.33	.32	.29	.20	.95	3.8	17	.58	.74	.61	.24
16	.29	.26	.32	.30	.27	.95	5.7	14	.57	.74	.46	.22
17	.29	.25	.30	.25	.29	.95	6.4	14	.55	.72	.48	.21
18	.28	.23	.30	.23	.27	.90	6.5	14	.49	.51	.65	.20
19	.29	.25	.31	.24	.27	.95	6.2	19	.52	.42	.60	.19
20	.28	.27	.33	.25	.25	.90	7.0	20	.57	.39	.66	.20
21	.23	.30	.33	.25	.29	.85	8.8	16	.51	.40	.48	.21
22	.21	.33	.33	.27	.36	1.2	10	14	.50	.44	.41	.21
23	.21	.32	.32	.27	.47	1.8	14	13	.53	.51	.37	.20
24	.22	.30	.32	.27	.50	3.0	16	11	.46	.69	.33	.20
25	.22	.28	.31	.21	.52	4.0	13	9.0	.43	.93	.30	.19
26	.22	.28	.31	.21	.50	4.5	13	6.3	.41	.88	.28	.19
27	.21	.26	.31	.26	.48	3.7	13	4.6	.39	.82	.24	.19
28	.21	.21	.27	.26	.45	3.3	11	4.1	.47	1.0	.22	.18
29	.22	.22	.22	.24	---	2.9	10	4.6	.52	1.8	.20	.19
30	.24	.23	.26	.26	---	2.1	9.9	3.7	.57	1.2	.20	.19
31	.25	---	.31	.27	---	2.5	---	2.1	---	.72	.20	---
TOTAL	7.14	7.84	8.68	8.03	8.27	46.18	197.4	394.6	24.53	20.46	16.90	6.08
MEAN	.23	.26	.28	.26	.30	1.49	6.58	12.7	.82	.66	.55	.20
MAX	.29	.33	.33	.31	.52	4.5	16	26	2.0	1.8	1.2	.38
MIN	.18	.21	.21	.19	.14	.37	1.6	2.1	.39	.39	.20	.15
AC-FT	14	16	17	16	16	92	392	783	49	41	34	12

CAL YR 1988 TOTAL 691.71 MEAN 1.89 MAX 22 MIN .07 AC-FT 1370
WTR YR 1989 TOTAL 746.11 MEAN 2.04 MAX 26 MIN .14 AC-FT 1480

09078600 FRYINGPAN RIVER NEAR THOMASVILLE, CO

LOCATION.--Lat 39°20'41", long 106°40'23", in NW¼NW¼ sec.21, T.8 S., R.83 W., Pitkin County, Hydrologic Unit 14010004, on right bank 400 ft upstream from private bridge, 400 ft downstream from North Fork, 1.6 mi southeast of Thomasville, and 1.7 mi northwest of Norrie.

DRAINAGE AREA.--134 mi².

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,210 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 28 to Dec. 1, and Dec. 26 to Mar. 21. Records good except for estimated daily discharges, which are fair. Transmountain diversions upstream from station to Arkansas River basin through Busk-Ivanhoe tunnel since June 1925 and Charles H. Boustead tunnel since May 16, 1972.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--14 years, 97.1 ft³/s; 70,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,550 ft³/s, June 8, 1987, gage height, 4.50 ft; minimum daily, 10 ft³/s, Nov. 28, 1976, Jan. 2, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 371 ft³/s at 0315 May 8, gage height, 3.00 ft; minimum daily, 15 ft³/s, Feb. 6-9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	22	23	21	19	20	44	109	187	153	130	30
2	27	25	23	22	20	20	40	115	215	104	97	27
3	28	26	23	22	20	21	38	113	204	99	88	26
4	28	25	23	22	20	19	35	113	206	111	89	26
5	31	22	23	22	18	19	36	112	215	108	96	26
6	34	24	23	23	15	21	42	150	225	106	86	26
7	32	27	24	22	15	24	64	245	204	107	77	25
8	34	25	22	21	15	26	90	310	217	115	70	26
9	33	25	22	19	15	28	86	248	212	117	66	30
10	32	26	23	20	19	30	73	266	207	113	67	30
11	33	28	23	20	19	30	69	249	224	120	66	31
12	33	24	23	17	19	30	61	226	238	142	75	33
13	31	28	23	17	18	28	62	187	217	162	74	52
14	34	27	23	17	18	29	76	182	197	120	67	47
15	31	26	22	18	18	26	96	156	220	105	63	49
16	28	22	22	18	18	28	123	142	228	105	59	43
17	28	25	22	18	18	30	146	141	210	105	55	36
18	27	26	23	18	18	29	165	177	205	99	62	34
19	26	23	24	18	19	30	189	187	212	93	60	31
20	27	24	23	18	20	31	217	204	201	87	67	38
21	26	24	22	18	20	32	257	216	211	85	58	42
22	26	26	22	18	20	32	251	223	188	81	51	35
23	25	29	23	19	20	30	254	237	216	92	47	32
24	25	27	22	19	20	33	267	238	215	124	44	31
25	25	26	23	19	21	39	245	214	248	138	40	29
26	26	25	23	18	21	47	224	177	227	154	36	28
27	26	25	20	18	21	46	192	177	217	114	36	28
28	23	23	20	19	20	47	146	190	218	140	34	29
29	24	22	20	19	---	55	132	200	218	163	32	28
30	25	23	20	19	---	45	118	208	209	171	31	27
31	24	---	21	19	---	43	---	185	---	132	31	---
TOTAL	882	750	693	598	524	968	3838	5897	6411	3665	1954	975
MEAN	28.5	25.0	22.4	19.3	18.7	31.2	128	190	214	118	63.0	32.5
MAX	34	29	24	23	21	55	267	310	248	171	130	52
MIN	23	22	20	17	15	19	35	109	187	81	31	25
AC-FT	1750	1490	1370	1190	1040	1920	7610	11700	12720	7270	3880	1930

CAL YR 1988 TOTAL 40781 MEAN 111 MAX 975 MIN 18 AC-FT 80890
WTR YR 1989 TOTAL 27155 MEAN 74.4 MAX 310 MIN 15 AC-FT 53860

09080190 RUEDI RESERVOIR NEAR BASALT, CO

LOCATION.--Lat 39°21'50", long 106°49'05", in NW¼ sec.18, T.8 S., R.84 W., Pitkin County, Hydrologic Unit 14010004, in gatehouse of Ruedi Dam just upstream from Rocky Fork Creek and 13 mi east of Basalt.

DRAINAGE AREA.--223 mi².

PERIOD OF RECORD.--May 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by an earthfill dam. Storage began in May 1968; dam completed July 16, 1968. Capacity, 102,300 acre-ft, 1969 survey, between elevations 7,540.00 ft, sill of auxiliary outlet, and 7,766.00 ft, crest of spillway. Dead storage below elevation 7,540.00 ft, 61 acre-ft. Figures given are total contents.

COOPERATION.--Records provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 103,900 acre-ft, July 15, 1973, elevation, 7,767.56 ft; minimum after first filling, 48,000 acre-ft, May 13, 1971, elevation, 7,698.03 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 97,400 acre-ft, Aug. 6, elevation, 7,760.91 ft; minimum contents, 64,400 acre-ft, Apr. 7, elevation, 7,722.05 ft.

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	7,750.60	87,800	-
Oct. 31	7,746.15	83,800	-4,000
Nov. 30	7,741.81	80,000	-3,800
Dec. 31	7,736.79	75,800	-4,200
CAL YR 1988			-5,000
Jan. 31	7,731.20	71,300	-4,500
Feb. 28	7,726.07	67,400	-3,900
Mar. 31	7,722.43	64,600	-2,800
Apr. 30	7,728.90	69,500	+4,900
May 31	7,744.13	82,000	+12,500
June 30	7,757.89	94,500	+12,500
July 31	7,760.80	97,300	+2,800
Aug. 31	7,759.26	95,800	-1,500
Sept. 30	7,752.76	89,700	-6,100
WTR YR 1989			+1,900

09080400 FRYINGPAN RIVER NEAR RUEDI, CO

LOCATION.--Lat 39°21'56", long 106°49'30", in SE¼SE¼ sec.12, T.8 S., R.85 W., Eagle County, Hydrologic Unit 14010004, on right bank 0.4 mi downstream from Rocky Fork Creek and Ruedi Dam, 1.5 mi west of former site of Ruedi, and 12.5 mi east of Basalt.

DRAINAGE AREA.--238 mi².

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 7,473.25 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to Nov. 7, 1970, at site 2.0 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Diversions for irrigation of hay meadows upstream from station. Transmountain diversions upstream from station to Arkansas River basin through Busk-Ivanhoe tunnel since June 1925 and Charles H. Boustead tunnel since May 16, 1972 (see elsewhere in this report). Flow regulated by Ruedi Reservoir (station 09080190) since May 18, 1968. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--22 years (water years 1968-89), 186 ft³/s; 134,800 acre-ft/yr, subsequent to completion of Ruedi Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,690 ft³/s, June 18, 1965, gage height, 5.16 ft, site and datum then in use; minimum daily, 16 ft³/s, Feb. 2, 1968 (result of storage in Ruedi Reservoir); minimum daily prior to construction of Ruedi Reservoir, 28 ft³/s, Mar. 4, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 408 ft³/s at 1330 Feb. 23, gage height, 2.50 ft; minimum daily, 82 ft³/s, May 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	115	115	115	117	120	109	93	132	112	132	148
2	149	115	115	115	117	120	108	85	133	112	132	148
3	146	115	115	115	117	120	108	83	132	113	132	149
4	114	115	115	115	117	121	103	82	132	115	129	151
5	112	115	115	115	117	122	103	93	131	115	116	152
6	112	115	115	115	117	121	103	108	130	115	115	152
7	112	115	115	115	117	120	103	108	130	115	115	152
8	112	115	115	115	117	116	103	110	130	115	114	152
9	112	115	115	115	117	109	103	115	128	115	114	152
10	112	115	115	115	117	108	104	121	128	115	113	153
11	114	115	115	115	117	106	103	128	128	115	112	156
12	114	115	115	115	117	106	103	128	128	114	112	156
13	114	115	115	115	117	106	103	127	126	114	112	156
14	114	115	115	115	117	108	103	125	126	114	113	156
15	114	115	115	115	117	108	101	124	126	114	112	156
16	114	115	115	115	117	108	100	124	123	114	112	157
17	114	114	115	115	117	108	100	124	122	113	113	158
18	114	114	115	115	117	108	99	123	122	112	115	158
19	114	114	115	115	117	108	99	122	121	117	115	160
20	114	114	115	117	117	107	99	121	120	136	115	160
21	114	114	115	117	117	106	99	122	121	137	115	160
22	114	114	115	117	117	106	99	126	120	137	115	162
23	114	114	115	117	124	107	100	129	120	136	116	162
24	115	114	115	117	122	108	104	131	113	136	117	162
25	115	114	115	117	118	108	106	132	116	136	117	162
26	115	114	115	117	118	108	108	133	114	136	118	162
27	115	114	115	117	119	108	109	134	114	136	118	165
28	115	115	115	117	120	108	108	134	114	136	118	167
29	115	115	115	117	---	108	107	132	113	136	119	174
30	115	115	115	117	---	108	106	132	112	136	127	192
31	115	---	115	117	---	108	---	132	---	135	148	---
TOTAL	3633	3439	3565	3589	3295	3433	3103	3686	3709	3802	3671	4750
MEAN	117	115	115	116	118	111	103	119	124	123	118	158
MAX	150	115	115	117	124	122	109	134	133	137	148	192
MIN	112	114	115	115	117	106	99	82	112	112	112	148
AC-FT	7210	6820	7070	7120	6540	6810	6150	7310	7360	7540	7280	9420

CAL YR 1988 TOTAL 59576 MEAN 163 MAX 319 MIN 112 AC-FT 118200
WTR YR 1989 TOTAL 43675 MEAN 120 MAX 192 MIN 82 AC-FT 86630

09081600 CRYSTAL RIVER ABOVE AVALANCHE CREEK, NEAR REDSTONE, CO

LOCATION.--Lat 39°13'56", long 107°13'36", in SE¼SW¼ sec.33, T.9 S., R.88 W., Pitkin County, Hydrologic Unit 14010004, on right bank 1.2 mi upstream from Avalanche Creek and 3.6 mi north of Redstone.

DRAINAGE AREA.--167 mi².

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,905 ft, from river-profile map.

REMARKS.--No estimated daily discharges. Records good. A few small diversions for irrigation upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--34 years, 300 ft³/s; 217,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,180 ft³/s, June 25, 1983, gage height, 6.12 ft; minimum daily, 22 ft³/s, Dec. 5, 1955, Feb. 15, 1964, Jan 2, Feb. 17, 18, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)
June 16	2400	*1,350	*3.86

Minimum daily, 33 ft³/s, Feb. 5, 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	53	50	47	46	51	123	251	1050	643	259	85
2	77	53	48	44	45	52	114	232	1060	581	264	82
3	73	54	47	46	44	52	111	224	1020	551	254	79
4	73	54	49	45	41	49	104	223	863	532	204	79
5	75	50	47	48	33	45	100	225	831	513	182	77
6	79	52	48	47	33	57	112	289	948	505	167	76
7	79	54	53	42	34	57	146	424	940	477	155	74
8	76	54	45	41	34	79	197	572	982	465	147	83
9	73	66	43	41	45	98	221	754	908	410	142	88
10	72	58	46	49	51	117	212	887	956	396	144	78
11	69	65	47	49	51	127	204	886	934	384	160	79
12	68	59	45	40	48	121	192	816	938	396	177	80
13	65	58	50	36	47	120	199	659	916	360	157	89
14	65	60	50	39	45	115	225	619	858	325	144	76
15	64	72	51	47	44	98	256	521	944	285	141	70
16	64	56	44	43	41	96	289	455	1130	258	131	66
17	63	60	40	44	47	99	321	414	1190	249	126	63
18	63	54	46	44	48	93	360	449	1140	234	147	76
19	61	52	54	45	47	98	418	601	1160	227	169	66
20	61	54	52	44	47	94	476	741	1080	220	154	118
21	60	58	48	45	45	84	580	902	976	210	138	94
22	60	61	47	45	44	87	613	921	703	215	125	82
23	59	64	49	47	48	93	599	1050	601	211	117	78
24	57	63	48	47	56	106	647	1060	538	249	111	72
25	57	62	49	47	64	121	633	1000	639	228	107	68
26	57	61	45	41	65	132	596	812	670	229	104	65
27	56	58	42	41	61	129	485	844	677	224	100	64
28	54	53	37	46	54	128	395	977	682	246	95	65
29	54	61	41	46	---	141	331	1110	686	307	91	62
30	55	57	45	43	---	125	292	1180	687	281	88	61
31	54	---	47	45	---	117	---	1110	---	214	87	---
TOTAL	2020	1736	1453	1374	1308	2981	9551	21208	26707	10625	4588	2295
MEAN	65.2	57.9	46.9	44.3	46.7	96.2	318	684	890	343	148	76.5
MAX	79	72	54	49	65	141	647	1180	1190	643	264	118
MIN	54	50	37	36	33	45	100	223	538	210	87	61
AC-FT	4010	3440	2880	2730	2590	5910	18940	42070	52970	21070	9100	4550

CAL YR 1988 TOTAL 80169 MEAN 219 MAX 1540 MIN 33 AC-FT 159000
WTR YR 1989 TOTAL 85846 MEAN 235 MAX 1190 MIN 33 AC-FT 170300

09085000 ROARING FORK RIVER AT GLENWOOD SPRINGS, CO

LOCATION.--Lat 39°32'37", long 107°19'44", IN SW¼SE¼ sec.9, T.6 S., R.89 W., Garfield County, Hydrologic Unit 14010004, on left bank at Glenwood Springs, 2,100 ft, upstream from mouth.

DRAINAGE AREA.--1,451 mi².

PERIOD OF RECORD.--October 1905 to September 1909, September 1910 to current year. Monthly discharge only for some periods, published in WSP 1313. Prior to October 1960, published as Roaring Fork at Glenwood Springs.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,720.73 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 20, 1915, nonrecording gage on highway bridge 800 ft downstream, at different datum. Nov. 20, 1915, to Oct. 26, 1917, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Jan. 15-18, 21-24, and Feb. 2-10. Records good except for estimated daily discharges, which are fair. Diversions upstream from station for irrigation of about 35,000 acres. Transmountain diversions to Arkansas River basin through Busk-Ivanhoe tunnel since 1925, Twin Lakes tunnel since 1935, and Charles H. Boustead tunnel since 1972. Natural flow of stream affected by storage in Ruedi Reservoir on Fryingpan River (station 09080190) since May 1968.

AVERAGE DISCHARGE.--65 years (water years 1906-9, 1911-71), 1,368 ft³/s; 991,100 acre-ft/yr prior to diversion through Charles H. Boustead tunnel; 18 years (water years 1972-89), 1,251 ft³/s, 906,300 acre-ft/yr, subsequent to diversions through Charles H. Boustead tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,000 ft³/s, July 1, 1957, gage height, 8.65 ft; maximum gage height, 8.7 ft, June 14, 1921, from floodmarks; minimum discharge, 145 ft³/s, Jan. 21, 1935, gage height, 0.65 ft; minimum daily discharge, 179 ft³/s, Jan. 21, 1935.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,340 ft³/s at 0700 June 17, gage height, 4.48 ft; minimum daily 320 ft³/s, Feb. 5-7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	575	481	507	467	418	401	566	666	2460	1900	1090	530
2	565	492	507	516	390	414	561	615	2510	1770	1120	523
3	551	495	501	488	340	447	573	571	2470	1670	1100	523
4	540	506	500	465	330	414	528	529	2230	1620	965	504
5	533	512	496	479	320	376	500	478	2130	1560	879	499
6	542	508	485	459	320	402	513	491	2310	1500	807	502
7	548	514	525	445	320	425	568	635	2300	1440	754	496
8	549	527	483	419	340	444	672	849	2390	1400	684	499
9	544	588	454	432	370	498	755	1250	2250	1310	648	509
10	526	567	474	506	420	540	738	1570	2250	1240	648	505
11	519	592	480	472	442	567	718	1720	2270	1180	674	502
12	523	604	465	446	415	564	688	1650	2290	1270	756	517
13	520	584	483	432	405	547	676	1390	2260	1260	745	571
14	520	590	489	432	393	573	708	1300	2170	1150	699	548
15	522	640	495	420	392	506	750	1180	2210	1090	675	543
16	524	596	468	420	377	491	805	1050	2540	1020	642	532
17	514	587	447	430	386	514	897	991	2920	928	636	517
18	499	590	473	430	396	486	987	953	2720	862	680	512
19	506	569	510	449	400	503	1120	1190	2870	830	693	521
20	520	539	500	428	399	510	1190	1430	2750	802	788	573
21	523	542	468	410	387	465	1400	1800	2620	776	755	596
22	518	552	490	410	373	464	1490	1960	2150	760	699	572
23	518	578	470	400	394	474	1410	2320	1890	797	660	563
24	513	586	459	400	398	512	1500	2440	1680	1000	643	557
25	506	580	473	411	408	543	1440	2450	1830	1060	635	549
26	506	562	480	403	421	575	1360	2100	1940	1010	611	550
27	496	540	437	397	416	583	1150	2080	1910	1000	583	536
28	492	490	424	421	408	562	971	2260	1940	976	543	533
29	484	544	413	412	---	597	823	2540	1970	1250	517	523
30	489	528	415	400	---	581	746	2820	1970	1410	513	538
31	485	---	444	409	---	529	---	2680	---	1140	514	---
TOTAL	16170	16583	14715	13508	10778	15507	26803	45953	68200	36981	22356	15948
MEAN	522	553	475	436	385	500	893	1483	2273	1193	721	532
MAX	575	640	525	516	442	597	1500	2820	2920	1900	1120	596
MIN	484	481	413	397	320	376	500	478	1680	760	513	496
AC-FT	32070	32890	29190	26790	21380	30760	53160	91160	135300	73350	44340	31630

CAL YR 1988 TOTAL 308595 MEAN 843 MAX 4090 MIN 390 AC-FT 612100
WTR YR 1989 TOTAL 303507 MEAN 832 MAX 2920 MIN 320 AC-FT 602000

09085100 COLORADO RIVER BELOW GLENWOOD SPRINGS, CO

LOCATION.--Lat 39°33'18", long 107°20'13", in NW¼NW¼ sec.9, T.6 S., R.89W., Garfield County, Hydrologic Unit 14010005, on left bank 0.6 mi downstream from Roaring Fork River and 1.0 mi northwest of Post Office in Glenwood Springs.

DRAINAGE AREA.--6,013 mi².

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5,700.75 ft above National Geodetic Vertical Datum of 1929 (Colorado State Highway Department benchmark).

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, power development, and diversions for irrigation of 110,000 acres.

AVERAGE DISCHARGE.--23 years, 3,527 ft³/s; 2,555,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,500 ft³/s, May 25, 1984, gage height, 12.49 ft; minimum daily, 870 ft³/s, Feb. 11, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,620 ft³/s at 0900 May 30, gage height, 6.44 ft; minimum daily, 926 ft³/s, Feb. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1730	1400	1450	1370	1260	1290	1840	3020	6220	3480	2670	2050
2	1630	1420	1450	1340	1280	1340	1800	2770	6080	3290	2660	2070
3	1740	1430	1380	1340	1300	1390	1770	2720	5830	3110	2810	2080
4	1650	1470	1390	1400	1290	1310	1670	2710	5230	2990	2580	2040
5	1650	1470	1360	1450	1040	1140	1630	2610	4840	2900	2420	2020
6	1680	1510	1310	1470	926	1190	1670	2580	5070	2770	2280	2020
7	1690	1490	1490	1370	936	1260	1810	2860	4960	2740	2180	1990
8	1690	1510	1410	1210	950	1300	2190	3480	4960	2910	2170	1960
9	1700	1640	1310	1100	1070	1430	2640	4440	4880	2840	2140	1940
10	1680	1640	1360	1270	1290	1580	2610	5310	4770	2720	2130	1930
11	1680	1670	1470	1410	1330	1640	2430	5770	4940	2740	2400	1930
12	1650	1550	1420	1290	1330	1670	2360	5720	5090	2830	2510	1950
13	1570	1580	1390	1080	1280	1700	2260	5110	4990	3020	2560	1930
14	1620	1610	1460	1030	1270	1800	2300	4720	4680	2840	2480	1930
15	1580	1750	1520	1200	1240	1600	2420	4440	4700	2560	2400	1950
16	1570	1650	1420	1200	1190	1570	2620	4070	5250	2360	2380	1810
17	1530	1590	1400	1240	1230	1680	2940	3850	5850	2170	2360	1700
18	1530	1610	1290	1280	1240	1610	3300	3660	5490	2150	2410	1690
19	1530	1580	1320	1290	1270	1680	3680	4130	5630	2120	2400	1780
20	1550	1630	1350	1270	1280	1690	3900	4670	5450	2180	2510	2020
21	1480	1470	1400	1250	1230	1570	4380	5560	5190	2240	2550	2100
22	1450	1500	1490	1220	1200	1530	4790	5880	4500	2280	2410	2110
23	1440	1620	1450	1200	1240	1550	4900	6550	4060	2470	2310	2080
24	1460	1620	1380	1250	1270	1650	5100	6900	3750	2770	2230	2000
25	1450	1620	1390	1290	1320	1800	5070	6750	3830	2950	2240	1940
26	1460	1600	1490	1200	1350	2090	4910	5770	3880	2860	2230	1950
27	1430	1530	1270	1120	1330	2210	4540	5480	3800	2780	2230	1930
28	1420	1250	1100	1180	1350	1980	4090	5770	3720	2630	2180	1940
29	1410	1550	1040	1230	---	2080	3590	6470	3620	2910	2140	1930
30	1420	1500	1150	1230	---	2130	3280	7120	3590	3360	2100	1920
31	1410	---	1340	1230	---	1850	---	6770	---	2840	2070	---
TOTAL	48480	46460	42450	39010	34292	50310	92490	147660	144850	84810	73240	58690
MEAN	1564	1549	1369	1258	1225	1623	3083	4763	4828	2736	2363	1956
MAX	1740	1750	1520	1470	1350	2210	5100	7120	6220	3480	2810	2110
MIN	1410	1250	1040	1030	926	1140	1630	2580	3590	2120	2070	1690
AC-FT	96160	92150	84200	77380	68020	99790	183500	292900	287300	168200	145300	116400

CAL YR 1988 TOTAL 976960 MEAN 2669 MAX 10200 MIN 1040 AC-FT 1938000
WTR YR 1989 TOTAL 862742 MEAN 2364 MAX 7120 MIN 926 AC-FT 1711000

09089500 WEST DIVIDE CREEK NEAR RAVEN, CO

LOCATION.--Lat 39°19'52", long 107°34'46", in NE¼SW¼ sec.29, T.8 S., R.91 W., Mesa County, Hydrologic Unit 14010005, on left bank 10 ft, downstream from private road bridge, 0.8 mi upstream from Brook Creek, 8 mi south of Raven, and 16 mi south of Silt.

DRAINAGE AREA.--64.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1955 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,050 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 14 to Mar. 9. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by water imported from Thompson Creek (Roaring Fork basin), Muddy Creek (Muddy Creek basin), and Buzzard Creek (Plateau Creek basin). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--34 years, 35.4 ft³/s; 25,650 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,410 ft³/s, May 14, 1984, gage height, 5.83 ft, from rating curve extended above 670 ft³/s; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 160 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 21	2400	162	3.88	May 21	0200	182	3.97
May 11	0100	*222	*4.12				

Minimum daily discharge, 0.05 ft³/s, Sept. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.76	.98	1.5	1.4	1.5	1.6	11	55	98	17	2.5	.37
2	.71	1.0	1.4	1.5	1.5	1.6	9.5	61	93	14	2.8	.30
3	.70	1.2	1.5	1.4	1.4	1.6	12	61	85	12	2.2	.23
4	.73	1.2	1.5	1.5	1.3	1.5	9.5	69	80	11	1.8	.15
5	.80	1.2	1.4	1.5	1.0	1.6	8.7	70	75	9.4	1.7	.11
6	.95	1.1	1.5	1.4	.93	1.8	13	90	77	8.2	1.2	.08
7	1.3	1.2	1.5	1.4	.98	2.3	22	123	75	7.6	1.1	.05
8	1.3	1.4	1.4	1.4	1.1	2.7	29	156	73	7.0	.85	.09
9	1.0	2.3	1.4	1.5	1.5	3.5	34	199	71	6.6	.83	.25
10	.92	2.3	1.5	1.6	1.7	6.8	31	200	74	5.8	1.5	.41
11	.85	2.7	1.5	1.5	1.7	9.4	29	197	74	5.6	2.0	.50
12	.84	2.9	1.5	1.3	1.6	12	26	175	69	9.0	6.3	.49
13	.95	2.7	1.6	1.3	1.6	15	29	130	67	15	5.3	.79
14	.99	2.5	1.6	1.4	1.5	16	35	122	63	7.0	2.5	1.1
15	1.0	2.6	1.4	1.5	1.7	16	43	194	58	6.2	1.8	.86
16	1.0	2.3	1.4	1.4	1.7	14	60	97	61	4.7	1.4	.61
17	1.0	2.3	1.4	1.4	1.7	8.7	75	94	60	3.7	1.4	.49
18	.97	2.0	1.6	1.4	1.7	9.2	83	100	52	3.1	3.8	.45
19	.97	1.8	1.7	1.4	1.7	8.6	90	134	55	2.7	4.5	.54
20	.98	1.7	1.6	1.5	1.6	7.7	104	151	47	2.2	5.9	.94
21	.92	1.6	1.6	1.5	1.5	8.5	122	150	41	2.0	5.7	1.8
22	.91	1.8	1.5	1.5	1.6	7.6	122	133	39	1.2	3.2	1.1
23	.85	1.8	1.6	1.5	1.7	8.6	110	145	34	2.0	2.1	.82
24	.84	1.8	1.6	1.5	1.8	9.6	128	133	31	5.6	1.5	.51
25	.84	1.7	1.5	1.5	2.0	12	128	114	28	2.9	1.2	.53
26	.87	1.6	1.4	1.4	2.0	15	123	92	25	3.8	1.0	.51
27	.89	1.6	1.3	1.4	2.0	15	91	89	22	3.4	.57	.48
28	.93	1.7	1.2	1.5	1.8	12	77	89	21	4.7	.66	.49
29	.98	1.6	1.4	1.5	---	16	66	92	21	12	.53	.45
30	1.0	1.6	1.5	1.4	---	11	60	90	20	6.1	.47	.43
31	1.0	---	1.4	1.5	---	10	---	103	---	3.7	.42	---
TOTAL	28.75	54.18	45.9	44.9	43.86	266.9	1780.7	3609	1689	205.3	69.07	15.91
MEAN	.93	1.81	1.48	1.45	1.57	8.61	59.4	116	56.3	6.62	2.23	.53
MAX	1.3	2.9	1.7	1.6	2.0	16	128	200	98	17	6.3	1.8
MIN	.70	.98	1.2	1.3	.98	1.5	8.7	55	20	1.2	.42	.05
AC-FT	57	107	91	89	87	529	3530	7160	3350	407	137	32

CAL YR 1988 TOTAL 7686.07 MEAN 21.0 MAX 214 MIN .00 AC-FT 15250
WTR YR 1989 TOTAL 7853.43 MEAN 21.5 MAX 200 MIN .05 AC-FT 15580

09089500 WEST DIVIDE CREEK NEAR RAVEN, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.-- May 1986 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO
APR												
11...	1245	28	284	8.3	4.0	9.3	130	0	40	6.5	13	0.5
MAY												
10...	1230	172	175	7.9	7.5	9.3	88	2	29	3.8	5.8	0.3
AUG												
24...	1330	1.6	295	--	17.0	8.2	140	0	43	7.8	14	0.5
SEP												
07...	1300	0.05	400	8.1	13.0	8.2	170	0	45	15	23	0.8

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
APR												
11...	1.2	137	17	3.4	0.20	9.3	173	0.23	13.2	0.01	--	<0.10
MAY												
10...	1.3	86	4.0	1.1	0.10	11	109	0.15	50.4	0.02	<0.01	<0.10
AUG												
24...	1.3	154	9.0	2.7	0.20	8.0	178	0.24	0.75	<0.01	--	<0.10
SEP												
07...	2.0	180	24	8.5	0.20	5.9	231	0.31	0.03	<0.01	--	<0.10

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
APR												
11...	--	0.01	--	0.19	0.20	--	0.11	--	0.02	--	4.8	4.4
MAY												
10...	<0.10	0.03	<0.01	0.57	0.60	0.20	0.05	0.03	0.02	<0.01	8.3	5.1
AUG												
24...	--	<0.01	--	--	0.40	--	0.02	--	<0.01	--	4.2	4.4
SEP												
07...	--	0.01	--	--	<0.20	--	0.02	--	<0.01	--	3.9	4.2

DATE	TIME	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
APR											
11...	1245	--	--	--	--	--	20	--	--	--	--
MAY											
10...	1230	3500	1	300	<10	<10	<10	<1	7	5	13
AUG											
24...	1330	--	--	--	--	--	10	--	--	--	--
SEP											
07...	1300	--	--	--	--	--	30	--	--	--	--

09089500 WEST DIVIDE CREEK NEAR RAVEN, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
APR											
11...	--	88	--	--	--	--	--	--	--	--	--
MAY											
10...	7300	860	8	280	<0.10	4	11	<1	<1	200	40
AUG											
24...	--	20	--	--	--	--	--	--	--	--	--
SEP											
07...	--	11	--	--	--	--	--	--	--	--	--

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
APR					
11...	1245	28	139	11	88
20...	1200	91	366	90	77
MAY					
10...	1230	172	578	268	69
18...	1000	112	139	42	80
25...	1220	117	364	115	77
JUN					
08...	1010	76	474	98	82
29...	1215	21	63	3.6	76
JUL					
26...	1310	4.8	160	2.2	99
AUG					
24...	1330	1.6	18	0.08	91
SEP					
07...	1300	0.05	7	0.00	62

09093700 COLORADO RIVER NEAR DE BEQUE, CO

LOCATION.--Lat 39°21'45", long 108°09'07", in NE¼SW¼ sec.7, T.8 S., R.96 W., Mesa County, Hydrologic Unit 14010006, on left bank 3.0 mi downstream from Alkali Creek and 3.8 mi northeast of DeBeque.

DRAINAGE AREA.--7,370 mi^2.

PERIOD OF RECORD.--Streamflow records, October 1966 to current year. Water-quality data available, August 1973 to September 1982. Sediment data available, October 1974 to September 1976.

GAGE.--Water-stage recorder. Elevation of gage is 4,940 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Jan. 8 to Feb. 22. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power development, and diversions for irrigation of about 158,000 acres. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--23 years, 3,884 ft^3/s; 2,814,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,200 ft^3/s, May 26, 1984, gage height, 14.83 ft; minimum daily, 914 ft^3/s, Dec. 22, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,430 ft^3/s at 1930 May 30, gage height, 7.33 ft, maximum gage height, 8.35 ft (backwater from ice); minimum daily discharge, 1,000 ft^3/s, Feb. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1790	1470	1560	1450	1440	1570	2000	3360	7350	3640	2590	1950
2	1740	1460	1530	1520	1450	1560	2060	3020	7040	3450	2560	1940
3	1720	1460	1490	1500	1480	1700	1980	2870	6800	3190	2640	1960
4	1750	1490	1470	1450	1500	1610	1930	2850	6320	3010	2560	1940
5	1700	1510	1480	1580	1490	1480	1830	2770	5720	2900	2390	1910
6	1720	1530	1420	1580	1200	1360	1850	2670	5710	2780	2230	1910
7	1730	1540	1440	1560	1000	1460	1900	2800	5830	2660	2110	1890
8	1730	1540	1570	1460	1020	1530	2140	3360	5640	2740	2070	1900
9	1730	1670	1420	1380	1060	1680	2610	4440	5710	2770	2040	1900
10	1740	1710	1430	1300	1280	1840	2910	5580	5510	2700	2030	1860
11	1720	1780	1500	1400	1470	1900	2760	6350	5630	2640	2160	1860
12	1720	1770	1510	1560	1480	1900	2630	6430	5730	2660	2330	1880
13	1690	1700	1490	1400	1440	1920	2540	6110	5860	2860	2430	1890
14	1640	1670	1490	1260	1420	1990	2490	5500	5490	2890	2400	1880
15	1690	1780	1570	1200	1400	1910	2550	5270	5310	2620	2320	1900
16	1660	1790	1560	1340	1390	1760	2730	4800	5610	2390	2270	1840
17	1630	1720	1470	1360	1380	1770	3010	4460	6230	2150	2230	1750
18	1600	1720	1450	1380	1420	1810	3360	4190	6300	2070	2290	1690
19	1590	1680	1420	1420	1480	1770	3840	4320	6090	2040	2280	1690
20	1590	1660	1420	1480	1430	1850	4250	5200	6080	1990	2360	1860
21	1590	1610	1470	1470	1400	1790	4630	6070	5810	2130	2400	2000
22	1540	1580	1540	1440	1450	1690	5200	6820	5350	2150	2370	2020
23	1510	1610	1550	1400	1420	1690	5400	7330	4690	2250	2240	2010
24	1520	1690	1510	1330	1480	1730	5560	7840	4280	2440	2170	1980
25	1510	1680	1470	1420	1530	1830	5630	7840	4050	2820	2140	1900
26	1510	1700	1540	1500	1620	2010	5460	7130	4190	2750	2130	1890
27	1510	1650	1500	1400	1610	2270	5200	6410	4150	2720	2130	1880
28	1500	1500	1290	1300	1570	2270	4820	6490	4050	2560	2100	1880
29	1490	1520	1230	1400	---	2110	4190	7200	3850	2660	2040	1870
30	1470	1650	1210	1420	---	2290	3700	7890	3800	3240	2000	1880
31	1470	---	1430	1430	---	2160	---	7960	---	2970	1960	---
TOTAL	50500	48840	45430	44090	39310	56210	101160	165330	164180	82840	69970	56710
MEAN	1629	1628	1465	1422	1404	1813	3372	5333	5473	2672	2257	1890
MAX	1790	1790	1570	1580	1620	2290	5630	7960	7350	3640	2640	2020
MIN	1470	1460	1210	1200	1000	1360	1830	2670	3800	1990	1960	1690
AC-FT	100200	96870	90110	87450	77970	111500	200700	327900	325700	164300	138800	112500

CAL YR 1988 TOTAL 1002600 MEAN 2739 MAX 10900 MIN 1210 AC-FT 1989000
WTR YR 1989 TOTAL 924570 MEAN 2533 MAX 7960 MIN 1000 AC-FT 1834000

09095500 COLORADO RIVER NEAR CAMEO, CO

LOCATION.--Lat 39°14'20", long 108°16'00", in SW¼SW¼ sec.30, T.9 S., R.97 W., Mesa County, Hydrologic Unit 14010006, on left bank 100 ft north of Interstate 70, 0.5 mi upstream from Jackson Canyon, 5.9 mi upstream from Grand Valley project diversion dam, and 7 mi northeast of Cameo.

DRAINAGE AREA.--8,050 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1933 to current year.

REVISED RECORDS.--WRD Colo. 1973: 1970.

GAGE.--Water-stage recorder. Datum of gage is 4,813.73 ft above National Geodetic Vertical Datum of 1929. (Levels by Colorado Department of Highways). Prior to Oct. 10, 1934, nonrecording gage on river and water-stage recorder on Highline Canal, about 10 mi downstream at different datum. Oct. 10, 1934, to Feb. 27, 1958, water-stage recorder at site 3.0 mi downstream at datum 22.55 ft, lower.

REMARKS.--Estimated daily discharges: Dec. 30 to Feb. 25, and Sept. 26-28. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power development, and diversion for irrigation of about 160,000 acres.

AVERAGE DISCHARGE.--56 years, 3,924 ft³/s; 2,843,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,300 ft³/s, May 26, 1984, gage height, 14.36 ft, minimum daily, 700 ft³/s, Dec. 29, 1939.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,530 ft³/s at 2030 May 30, gage height, 6.56 ft, maximum gage height, 9.70 ft, Jan. 30, 31 (backwater from ice); minimum daily discharge, 1,050 ft³/s, Feb. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1960	1550	1650	1500	1500	1570	2040	3230	7320	3740	2730	2070
2	1890	1540	1590	1570	1510	1560	2070	2970	7000	3610	2680	2050
3	1810	1550	1590	1560	1540	1870	2010	2820	6720	3390	2710	2070
4	1860	1570	1550	1500	1560	1600	1970	2820	6190	3240	2710	2050
5	1780	1590	1560	1630	1550	1460	1850	2800	5500	3130	2540	2020
6	1790	1600	1510	1630	1250	1330	1860	2740	5390	3270	2360	1950
7	1840	1630	1490	1610	1050	1440	1930	3460	5590	3300	2240	1950
8	1840	1630	1650	1520	1070	1560	2140	3290	5390	2970	2160	1930
9	1830	1750	1530	1430	1110	1740	2580	4280	5490	3140	2150	1950
10	1840	1790	1480	1340	1330	1890	2890	5480	5310	2990	2140	1920
11	1850	1910	1510	1450	1540	1980	2830	6270	5400	2640	2200	1970
12	1850	1920	1620	1600	1550	1950	2690	6500	5490	2670	2350	1900
13	1840	1820	1570	1450	1510	1950	2610	6230	5690	2800	2500	1920
14	1730	1770	1540	1310	1490	1970	2510	5560	5320	2860	2490	1920
15	1780	1860	1610	1260	1470	1940	2530	5290	5210	2650	2440	1940
16	1770	1890	1640	1400	1460	1770	2650	4830	5460	2440	2390	1910
17	1760	1810	1550	1420	1450	1760	2860	4530	6100	2300	2370	1810
18	1710	1770	1520	1440	1490	1840	3120	4290	6280	2330	2400	1710
19	1680	1750	1540	1470	1550	1780	3520	4320	5970	2220	2400	1720
20	1680	1720	1480	1530	1500	1890	3890	4990	5950	2180	2440	1850
21	1690	1690	1500	1520	1470	1850	4230	5830	5570	2300	2510	2020
22	1640	1620	1600	1490	1520	1750	4800	6660	5070	2350	2510	2060
23	1610	1660	1650	1460	1490	1730	5050	7100	4470	2390	2400	2070
24	1600	1750	1610	1390	1550	1770	5250	7650	4140	2540	2320	2070
25	1610	1780	1540	1470	1600	1870	5350	7600	3990	2890	2300	2010
26	1600	1800	1590	1550	1720	2030	5180	7080	4110	2910	2270	1990
27	1590	1760	1620	1460	1680	2290	4900	6320	4180	2870	2250	1970
28	1590	1640	1340	1350	1580	2330	4490	6390	4060	2710	2250	1950
29	1590	1450	1180	1460	---	2180	3930	7050	3900	2600	2210	1920
30	1560	1700	1300	1480	---	2270	3500	7370	3850	3260	2160	1930
31	1550	---	1480	1490	---	2200	---	8050	---	3110	2100	---
TOTAL	53720	51270	47590	45740	41090	57120	97160	163800	160110	87310	73680	58590
MEAN	1733	1709	1535	1475	1467	1843	3239	5287	5337	2816	2377	1953
MAX	1960	1920	1650	1630	1720	2330	5350	8050	7320	3740	2730	2070
MIN	1550	1450	1180	1260	1050	1330	1850	2740	3850	2180	2100	1710
AC-FT	106600	101700	94390	90730	81500	113300	192700	325100	317600	173200	146100	116200

CAL YR 1988 TOTAL 1056910 MEAN 2888 MAX 12100 MIN 1180 AC-FT 2096000
WTR YR 1989 TOTAL 937260 MEAN 2568 MAX 8050 MIN 1050 AC-FT 1859000

09095500 COLORADO RIVER NEAR CAMEO, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1933 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1935 to current year.
WATER TEMPERATURES: April 1949 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1982.

REMARKS.--Daily maximum and minimum specific-conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,970 microsiemens Jan. 19, 1940; minimum, 230 microsiemens June 2, 3 1984.
WATER TEMPERATURES: Maximum, 25.8°C July 22, 1989; minimum, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 1,720 microsiemens Feb. 13; minimum, 336 microsiemens May 31.
WATER TEMPERATURES: Maximum recorded, 25.8°C July 22; minimum, 0.0°C many days in winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO
OCT											
19...	1300	1600	1230	8.5	11.0	260	120	71	20	140	4
NOV											
09...	1200	1650	1230	8.2	7.5	290	140	80	23	140	4
DEC											
07...	1100	1460	1260	8.2	1.5	290	120	78	22	150	4
MAR											
16...	1400	1750	1120	8.2	6.5	260	110	72	20	110	3
APR											
05...	1400	1880	1100	8.2	7.5	260	110	71	21	120	3
MAY											
10...	1350	5380	522	8.0	14.5	150	46	43	10	46	2
JUN											
22...	1300	4970	507	8.2	13.0	150	50	44	9.7	44	2
JUL											
19...	0900	2200	1000	8.4	20.5	250	110	71	17	110	3
AUG											
16...	1400	2380	880	8.6	19.5	220	86	64	14	90	3
SEP											
06...	1400	2000	940	8.4	16.5	210	93	63	14	110	3

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
OCT										
19...	3.9	143	170	180	0.20	6.9	678	0.92	2930	<0.10
NOV										
09...	4.1	158	180	190	0.30	8.2	720	0.98	3210	<0.10
DEC										
07...	4.0	164	180	200	0.30	8.2	742	1.01	2920	0.25
MAR										
16...	3.8	155	170	150	0.30	9.8	630	0.86	2980	0.34
APR										
05...	3.8	155	170	150	0.30	8.9	639	0.87	3240	0.24
MAY										
10...	2.1	103	67	54	0.20	8.0	292	0.40	4240	<0.10
JUN										
22...	1.7	100	66	55	0.20	6.2	287	0.39	3850	<0.10
JUL										
19...	3.6	139	150	140	0.30	8.0	583	0.79	3460	<0.10
AUG										
16...	3.5	132	120	120	0.30	8.1	499	0.68	3210	<0.10
SEP										
06...	3.8	122	130	150	0.30	5.9	550	0.75	2970	<0.10

09095500 COLORADO RIVER NEAR CAMEO, CO--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1020	1120	1140	1350	1150	1260	1010	645	413	698	840	942
2	1030	1190	1150	1190	1180	1260	1060	684	438	708	838	949
3	1040	1260	1170	1060	1130	1000	1060	722	444	728	827	954
4	1070	1250	1180	1040	1120	1070	1090	727	445	754	841	944
5	1080	1240	1200	1030	1160	1150	1100	732	453	778	872	952
6	1100	1210	1190	1000	1270	1250	1130	741	465	799	911	958
7	1110	1200	1240	990	1330	1320	1120	750	464	806	963	961
8	1110	1200	1260	1010	1370	1310	1090	715	464	828	979	964
9	1130	1200	1200	1040	1400	1060	1010	617	470	821	971	963
10	1150	1180	1200	1070	1490	974	885	523	493	832	966	959
11	1170	1060	1270	1090	1490	992	837	458	522	835	965	965
12	1200	1080	1230	1080	1550	1090	844	445	539	826	920	962
13	1250	1100	1210	1070	1680	1160	886	476	549	815	878	986
14	1240	1120	1210	1050	1680	1160	842	517	551	789	861	1010
15	1260	1120	1260	1100	1660	1150	849	537	571	774	858	1010
16	1260	1110	1190	1150	1630	1160	834	534	568	808	866	1010
17	1260	1090	1170	1150	1580	1180	794	539	530	870	868	1030
18	1250	1130	1210	1140	1640	1160	728	568	488	944	872	1060
19	1240	1140	---	1110	1540	1130	751	591	503	971	869	1100
20	1330	1150	1270	1090	1360	1150	733	559	502	964	878	---
21	1390	1160	1280	1090	1270	1120	774	514	510	965	869	1100
22	1380	1170	---	1100	1150	1140	731	515	520	931	858	---
23	1280	1190	1260	1100	---	1190	695	540	572	910	866	---
24	1240	1180	1230	1110	---	1200	686	407	640	881	890	---
25	1210	1140	1240	1110	---	1180	675	475	675	847	907	---
26	1170	1130	1280	1100	1250	1130	674	511	671	803	919	---
27	1140	1120	1280	1110	1240	1070	684	543	664	827	925	---
28	1130	1120	1300	1150	1260	991	707	558	666	827	920	---
29	1130	1150	---	1170	---	991	745	553	675	853	917	1090
30	1130	1220	1490	1170	---	1030	691	517	692	832	923	1070
31	1130	---	1480	1150	---	984	---	371	---	846	932	---
MEAN	1180	1160	---	1100	---	1130	857	567	539	835	896	---

09095500 COLORADO RIVER NEAR CAMEO, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.0	11.4	9.9	7.7	2.1	.0	.0	.0	.0	.0	5.8	2.9
2	15.4	11.8	9.4	6.8	1.9	.0	.0	.0	.0	.0	4.8	3.4
3	15.4	12.2	10.3	8.1	1.8	.0	.0	.0	.0	.0	3.9	2.0
4	14.4	12.6	9.6	7.9	1.9	.0	.0	.0	.1	.0	2.5	.0
5	15.1	12.2	8.2	6.1	1.8	.0	.0	.0	.1	.0	3.3	.0
6	14.4	12.5	7.6	5.5	1.7	.0	.0	.0	.2	.0	5.5	1.8
7	14.7	11.7	7.7	5.6	2.6	1.2	.0	.0	.1	.0	6.1	3.7
8	14.7	11.8	7.8	6.1	2.3	.7	.1	.0	.1	.0	8.2	4.6
9	13.4	11.2	8.0	6.7	1.4	.0	.0	.0	.1	.0	9.6	5.9
10	12.6	9.7	7.1	6.0	1.0	.0	.1	.0	.1	.0	9.8	6.6
11	13.2	9.9	6.7	6.0	1.6	.0	.1	.0	.0	.0	9.6	6.9
12	12.2	10.2	6.2	4.7	1.5	.0	.1	.0	.0	.0	9.2	7.1
13	13.6	10.5	7.1	4.6	1.3	.0	.0	.0	.0	.0	9.3	6.5
14	13.6	11.1	7.2	5.9	.9	.0	.0	.0	.0	.0	8.3	5.7
15	14.0	11.0	6.3	5.0	1.5	.2	.1	.0	.0	.0	6.8	3.8
16	13.8	10.8	5.4	3.6	1.2	.0	.0	.0	.0	.0	8.2	4.0
17	13.7	10.7	4.6	3.6	.9	.0	.0	.0	.0	.0	8.3	5.8
18	14.0	11.2	4.6	3.0	.3	.0	.0	.0	.0	.0	8.4	5.3
19	13.6	11.1	3.9	2.0	.6	.0	.0	.0	.0	.0	8.0	6.6
20	12.8	10.4	3.3	1.5	1.3	.1	.0	.0	.0	.0	7.0	5.4
21	12.6	9.8	2.9	.9	.8	.2	.0	.0	.0	.0	7.7	3.9
22	11.8	9.4	2.8	.9	.7	.0	.0	.0	.0	.0	9.6	5.8
23	11.6	8.8	3.6	1.5	.9	.0	.0	.0	2.0	.0	10.2	7.1
24	11.6	8.8	4.4	3.2	.1	.0	.0	.0	2.0	.0	11.6	8.1
25	10.9	8.7	4.3	3.3	.7	.0	.0	.0	4.6	.4	11.6	8.1
26	10.9	8.1	3.7	2.8	.4	.0	.1	.0	6.1	3.7	10.2	9.0
27	10.6	8.2	2.7	1.3	.0	.0	.1	.0	5.9	3.4	11.1	8.5
28	10.3	7.9	1.5	.1	.0	.0	.0	.0	5.7	2.7	11.8	7.9
29	10.1	8.1	1.0	.0	.0	.0	.1	.0	---	---	11.1	8.3
30	10.6	8.3	1.7	.0	.0	.0	.1	.0	---	---	9.2	7.2
31	10.8	8.3	---	---	.0	.0	.1	.0	---	---	9.2	6.0
MONTH	15.4	7.9	10.3	.0	2.6	.0	.1	.0	6.1	.0	11.8	.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.2	7.6	13.2	9.1	15.2	11.8	21.1	17.7	22.8	20.7	20.8	16.4
2	10.0	7.1	13.7	9.9	15.7	[illegible]	21.8	17.4	22.7	20.1	20.9	16.6
3	10.1	7.5	12.8	11.0	15.0	12.1	21.7	17.7	22.9	19.6	20.3	16.5
4	10.2	6.4	14.0	11.0	14.1	11.4	[illegible]	18.4	22.7	19.9	19.5	15.9
5	11.2	6.7	15.5	11.4	15.4	12.1	22.7	18.4	22.3	19.7	20.0	15.1
6	12.9	8.1	15.9	12.6	[illegible]	13.9	22.9	19.4	22.7	19.7	19.9	16.4
7	13.8	9.9	16.6	13.6	15.9	13.8	[illegible]	20.2	22.4	19.3	20.3	16.6
8	14.6	11.5	16.9	14.5	15.9	[illegible]	24.1	20.4	22.7	19.2	18.7	15.6
9	13.7	10.9	15.9	15.0	16.3	13.6	23.8	20.8	22.7	21.0	17.8	14.7
10	10.9	7.9	15.2	14.1	15.9	14.3	22.8	21.0	22.4	19.7	17.8	15.7
11	11.9	9.1	14.0	12.1	15.4	12.9	22.8	20.2	22.7	19.9	16.7	14.0
12	12.2	7.7	13.7	10.8	15.4	13.7	22.8	19.7	22.8	20.0	15.5	13.7
13	12.7	7.8	[illegible]	9.7	[illegible]	13.9	22.9	19.6	22.3	19.5	16.4	12.6
14	[illegible]	8.4	[illegible]	10.5	16.1	[illegible]	22.6	[illegible]	22.1	19.1	17.2	12.9
15	14.9	9.4	11.4	10.0	17.9	15.1	22.7	19.9	22.4	18.4	17.6	13.2
16	14.7	[illegible]	[illegible]	10.3	17.8	[illegible]	[illegible]	[illegible]	[illegible]	19.8	[illegible]	14.5
17	14.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	22.9	18.8	[illegible]	[illegible]	17.7	14.4
18	14.5	12.0	[illegible]	[illegible]	[illegible]	[illegible]	22.8	[illegible]	[illegible]	18.4	---	---
19	14.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---
20	14.7	[illegible]	14.9	[illegible]	17.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---
21	13.9	[illegible]	14.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---
22	12.9	11.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---
23	12.9	10.6	14.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---
24	12.7	11.0	14.6	11.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---
25	12.4	10.8	[illegible]	11.6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---
26	11.8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---
27	12.7	9.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---
28	9.8	9.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---
29	9.4	8.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	11.0	8.2	15.0	13.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31	---	---	[illegible]	[illegible]	---	---	[illegible]	[illegible]	[illegible]	[illegible]	---	---
MONTH	14.7	6.4	16.9	9.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---

09095500 COLORADO RIVER NEAR CAMEO, CO--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
05...	1100	1750	24	113	78
12...	1100	1840	19	94	81
19...	1300	1600	12	52	76
26...	1200	1570	9	38	79
NOV					
02...	1100	1500	11	45	56
09...	1200	1650	20	89	86
16...	1000	1860	118	593	85
23...	1200	1570	34	144	82
30...	1200	1620	42	184	72
DEC					
07...	1100	1460	25	99	60
MAR					
02...	1400	1490	213	857	82
08...	1400	1500	290	1170	92
16...	1400	1750	124	586	82
22...	1400	1770	22	105	88
28...	1045	2360	235	1500	74
APR					
05...	1400	1880	54	274	83
12...	1400	2700	119	868	75
19...	1100	3540	598	5720	65
26...	1000	4860	328	4300	77
MAY					
03...	1000	2840	69	529	87
10...	1350	5380	315	4580	69
17...	1030	4420	94	1120	58
24...	0900	7490	408	8250	53
31...	1200	8010	239	5170	[illegible]
JUN					
07...	1015	5500	57	846	57
14...	1100	5340	38	545	63
20...	1300	4970	23	309	69
27...	0900	4160	22	247	72
JUL					
05...	1200	3090	17	141	64
11...	1100	2660	66	474	92
13...	0900	2200	25	148	77
26...	1100	2900	115	900	91
AUG					
01...	0945	2700	1490	10900	99
09...	0940	2150	108	627	90
16...	1400	2380	33	212	75
23...	0910	2380	34	218	90
30...	1010	2130	14	81	77
SEP					
06...	1400	2000	11	59	82
13...	1200	1970	18	96	87
20...	1000	1800	26	126	90
28...	1055	1970	37	197	93

09105000 PLATEAU CREEK NEAR CAMEO, CO

LOCATION.--Lat 39°11'00", long 108°16'02", in SW¼SW¼ sec.18, T.10 S., R.97 W., Mesa County, Hydrologic Unit 14010005, on left bank 300 ft from State Highway 65, 1.15 mi upstream from mouth and 4 mi northeast of Cameo.

DRAINAGE AREA.--592 mi².

PERIOD OF RECORD.--October 1935 to September 1983. October 1985 to current year. Prior to May 1936, monthly discharges only, published in WSP 1313.

REVISED RECORDS.--WSP 979: 1942. WSP 2124: Drainage area. WDR CO-83-2: 1973 (M), 1975 (M).

GAGE.--Water-stage recorder. Elevation of gage is 4,840 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Aug. 27, 1936, nonrecording gage.

REMARKS.--Estimated daily discharges: Jan. 1 to Feb. 18, and Mar. 9-20. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, diversions for irrigation of about 25,000 acres, return flow from irrigated areas, and for power development. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--52 years (water years 1935-83, 1986-89) 189 ft³/s; 136,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,010 ft³/s, June 22, 1983, gage height, 8.51 ft; maximum gage height, 8.59 ft, May 28, 1983; minimum daily discharge, 8.2 ft³/s, Aug. 15, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 396 ft³/s at 2245 July 29, gage height, 3.37 ft; minimum daily, 34 ft³/s, July 4, 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	86	85	75	88	91	117	136	124	39	53	59
2	102	90	87	76	86	93	121	119	114	38	53	72
3	95	91	90	74	83	134	117	108	111	37	46	74
4	91	91	92	76	76	81	120	110	113	34	43	74
5	94	95	88	84	70	68	105	116	107	34	41	70
6	94	103	85	84	69	82	107	119	103	36	41	47
7	98	109	86	80	68	91	132	167	104	37	42	47
8	99	113	82	74	70	124	172	217	100	39	58	51
9	104	129	81	82	90	140	204	241	108	43	58	79
10	110	122	83	87	100	160	184	240	105	46	58	80
11	121	151	84	87	120	180	169	262	104	47	59	83
12	128	137	80	82	116	170	146	200	106	49	64	87
13	129	123	81	74	110	165	141	168	104	50	65	83
14	128	123	83	68	100	135	148	142	104	51	58	83
15	123	133	82	69	96	125	166	136	97	51	60	82
16	121	116	83	73	88	120	200	121	94	51	60	62
17	119	116.	85	79	96	115	235	121	82	48	57	56
18	110	104	83	80	100	110	250	117	82	46	64	55
19	97	89	83	80	88	120	263	130	81	47	57	53
20	97	87	81	80	93	105	261	146	82	41	55	58
21	96	88	76	81	78	98	284	160	69	39	58	58
22	92	89	76	82	70	109	290	153	68	37	58	59
23	91	89	76	84	75	105	275	156	67	38	55	60
24	90	93	75	86	81	126	282	163	66	42	54	62
25	89	93	85	80	95	135	269	162	67	43	50	61
26	88	93	77	76	123	145	237	136	62	43	46	62
27	88	89	70	79	115	143	202	131	53	44	45	61
28	87	79	69	84	88	125	171	142	48	45	44	57
29	86	91	83	83	---	132	167	150	46	62	42	55
30	86	89	74	78	---	126	141	138	42	110	41	57
31	86	---	75	82	---	108	---	131	---	58	41	---
TOTAL	3142	3101	2520	2459	2532	3761	5676	4738	2613	1425	1626	1947
MEAN	101	103	81.3	79.3	90.4	121	189	153	87.1	46.0	52.5	64.9
MAX	129	151	92	87	123	180	290	262	124	110	65	87
MIN	86	79	69	68	68	68	105	108	42	34	41	47
AC-FT	6230	6150	5000	4880	5020	7460	11260	9400	5180	2830	3230	3860

CAL YR 1988 TOTAL 40368 MEAN 110 MAX 627 MIN 56 AC-FT 80070
WTR YR 1989 TOTAL 35540 MEAN 97.4 MAX 290 MIN 34 AC-FT 70490

09107000 TAYLOR RIVER AT TAYLOR PARK, CO

LOCATION.--Lat 38°51'37", long 108°33'58", in NW¼NE¼ sec.5, T.14 S., R.82 W., Gunnison County, Hydrologic Unit 14020001, on left bank 0.2 ft upstream from Taylor Park Reservoir waterline, 2.7 mi north of Taylor Park, and 21 mi northeast of Almont.

DRAINAGE AREA.--128 mi²

PERIOD OF RECORD.--June 1929 to Sept. 1934, Oct. 1987 to current year. Records for 1929-1934 provided by Colorado Division of Water Resources, published in WSP 1313.

REVISED RECORDS.--WSP 1313: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 9,340 ft above National Geodetic Vertical Datum of 1929, from topographic map. June 1929 to Sept. 1934 water-stage recorder at different datum at site flooded by waters of Taylor Park Reservoir since 1937.

REMARKS.--Estimated daily discharges: Nov. 18 to Dec. 14, Dec. 27-31, Jan. 7-10, Jan. 26 to Feb. 1, Feb. 6 to Mar. 2, and Mar. 5, 6. Records good except for estimated daily discharges, which are poor. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--7 years (water years 1930-34, 1988-89), 90.6 ft³/s; 65,640 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,020 ft³/s, May 31, 1933, gage height, 2.80 ft, from rating curve extended above 480 ft³/s, site and datum then in use; minimum discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 320 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 24	0100	451	2.95	June 8	0200	402	2.84
May 30	0100	*496	*3.05	June 17	0100	398	2.83

Minimum daily discharge, 24 ft³/s, Feb. 7, 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	35	29	35	30	35	47	108	371	160	137	55
2	41	36	30	36	28	34	40	112	361	151	158	52
3	40	38	31	36	27	33	40	109	343	144	135	52
4	40	35	31	38	26	33	36	108	304	139	111	52
5	42	32	30	36	27	32	38	102	327	136	100	51
6	45	34	29	35	25	35	43	112	338	130	99	50
7	46	38	29	34	24	37	58	139	330	127	92	50
8	46	37	30	33	24	36	75	183	367	124	89	52
9	43	40	30	33	26	39	84	232	320	120	87	57
10	43	28	30	34	30	41	68	274	309	117	91	52
11	43	41	32	34	32	44	66	243	302	117	102	51
12	42	36	32	32	35	45	60	216	319	137	111	65
13	42	40	33	33	37	41	61	191	311	132	106	80
14	42	40	31	35	38	41	72	198	301	115	100	68
15	42	37	28	35	38	41	88	182	313	109	91	62
16	40	27	30	35	38	40	117	167	346	101	83	58
17	40	38	30	36	37	43	132	141	347	96	82	58
18	39	37	33	35	38	40	173	148	318	91	87	54
19	33	33	31	35	39	42	177	194	321	88	83	53
20	37	32	30	34	37	41	195	239	300	85	81	94
21	37	33	30	32	35	41	215	284	278	84	79	80
22	37	34	30	32	34	42	208	325	237	87	74	63
23	37	36	29	31	37	43	209	374	212	94	69	58
24	36	35	29	29	41	44	226	389	194	141	65	54
25	36	34	30	31	43	47	223	370	199	116	62	51
26	35	33	30	28	43	48	204	295	190	117	60	50
27	35	30	28	28	40	48	178	308	181	110	60	48
28	34	28	27	30	37	50	141	361	177	115	60	43
29	35	28	27	30	---	54	122	397	176	149	59	48
30	39	29	29	28	---	42	114	452	170	135	56	47
31	35	---	32	29	---	45	---	396	---	112	55	---
TOTAL	1227	1034	930	1022	946	1276	3510	7349	8562	3679	2724	1713
MEAN	39.6	34.5	30.0	33.0	33.8	41.2	117	237	285	119	87.9	57.1
MAX	46	41	33	38	43	54	226	452	371	160	158	94
MIN	34	27	27	28	24	32	36	102	170	84	55	47
AC-FT	2430	2050	1840	2030	1880	2530	6960	14580	16980	7300	5400	3400

CAL YR 1988 TOTAL 28895 MEAN 78.9 MAX 351 MIN 27 AC-FT 57310
WTR YR 1989 TOTAL 33972 MEAN 93.1 MAX 452 MIN 24 AC-FT 67380

09107500 TEXAS CREEK AT TAYLOR PARK, CO

LOCATION.--Lat 38°50'51", long 106°33'13", in SE¼NW¼ sec.9, T.14 S., R.82 W., Gunnison County, Hydrologic Unit 14020001, on right bank 150 ft upstream from bridge on county road 742, 1.8 mi north of Taylor Park, and 20 mi northeast of Almont.

DRAINAGE AREA.--40.4 mi^2.

PERIOD OF RECORD.--June 1929 to September 1934, September 1987 to current year. Records for 1929-34 provided by Colorado Division of Water Resources, published in WSP 1313.

REVISED RECORDS.--WSP 1313: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 9,380 ft above National Geodetic Vertical Datum of 1929, from topographic map. June 1929 to Sept. 1934, water-stage recorder at different datum. Site flooded by Taylor Park Reservoir since 1937.

REMARKS.--Estimated daily discharges: Oct. 26-29, Nov. 5-8, 16-27, and Nov. 29 to April 1. Records good except for estimated daily discharges, which are poor. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--7 years (water years 1930-34, 1988-89), 36.9 ft^3/s; 26,730 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 353 ft^3/s, June 15, 1929; minimum discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 225 ft^3/s at 0600 August 1, gage height, 3.55 ft; minimum daily, 3.0 ft^3/s, Feb. 7, 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	6.0	4.4	4.4	3.6	12	26	135	91	178	17
2	11	14	6.2	4.3	4.3	3.5	11	28	130	89	123	17
3	11	10	6.0	4.5	4.1	3.5	11	25	126	83	97	16
4	11	10	5.9	4.7	3.6	3.6	11	24	104	80	74	16
5	12	10	5.8	4.7	3.4	3.5	11	23	106	81	62	16
6	15	11	5.8	4.5	3.2	3.8	12	25	130	77	55	15
7	15	12	5.8	4.2	3.0	4.2	15	35	125	71	48	15
8	14	12	5.6	4.1	3.0	4.5	20	57	140	66	43	16
9	13	11	5.3	4.2	3.2	4.8	25	96	130	64	40	21
10	12	14	5.4	4.5	3.4	5.0	22	110	121	58	41	18
11	13	15	5.2	4.3	3.9	5.4	20	101	121	57	41	17
12	12	13	5.5	4.0	3.9	5.8	18	90	134	69	41	19
13	12	12	5.6	4.0	3.7	5.8	18	76	132	90	41	23
14	12	13	5.6	4.3	3.4	5.4	22	70	123	65	40	22
15	11	11	5.4	4.3	3.1	5.0	24	62	142	54	37	20
16	11	10	5.2	4.4	3.5	4.5	31	53	163	48	34	20
17	11	9.2	5.2	4.5	3.7	5.0	33	47	165	43	33	20
18	11	8.6	5.6	4.5	3.7	5.1	37	47	159	41	34	19
19	11	8.0	5.5	4.4	3.5	5.0	44	93	156	38	34	18
20	11	8.0	5.0	4.3	3.3	4.5	48	105	148	38	34	30
21	10	8.6	5.0	4.5	3.2	4.2	56	121	140	37	32	31
22	10	9.8	5.2	4.6	3.5	4.2	56	124	116	36	30	25
23	10	9.0	5.2	4.7	4.1	4.4	59	157	104	47	26	23
24	10	8.5	5.1	4.8	4.4	4.5	64	163	89	72	25	22
25	10	8.2	4.8	4.4	4.4	5.0	63	146	100	66	22	20
26	10	7.5	4.2	4.2	4.1	5.8	61	106	101	73	22	19
27	11	7.2	3.9	4.2	3.8	5.6	53	111	96	63	21	18
28	10	6.8	3.7	4.5	3.6	6.6	38	126	99	55	21	17
29	10	6.4	3.7	4.2	---	8.1	33	154	103	70	20	16
30	11	6.0	4.0	4.2	---	10	30	157	94	70	19	16
31	14	---	4.4	4.4	---	11	---	143	---	60	19	---
TOTAL	356	300.8	160.8	135.8	102.4	160.9	958	2701	3732	1952	1387	582
MEAN	11.5	10.0	5.19	4.38	3.66	5.19	31.9	87.1	124	63.0	44.7	19.4
MAX	15	15	6.2	4.8	4.4	11	64	163	165	91	178	31
MIN	10	6.0	3.7	4.0	3.0	3.5	11	23	89	36	19	15
AC-FT	706	597	319	269	203	319	1900	5360	7400	3870	2750	1150

CAL YR 1988 TOTAL 9980.0 MEAN 27.3 MAX 169 MIN 3.7 AC-FT 19800
WTR YR 1989 TOTAL 12528.7 MEAN 34.3 MAX 178 MIN 3.0 AC-FT 24850

09108500 TAYLOR PARK RESERVOIR AT TAYLOR PARK, CO

LOCATION.--Lat 38°49'07", long 106°36'24", Gunnison County, Hydrologic Unit 14020001, at dam on Taylor River just downstream from Taylor Park, 16 mi northeast of Almont.

DRAINAGE AREA.--254 mi².

PERIOD OF RECORD.--October 1937 to current year. Prior to October 1938, published in WSP 1313.

REVISED RECORDS.-- WSP 1089: 1940(M), 1942(M), 1945-46. WSP 1924: Drainage area.

GAGE.--Nonrecording gage read once daily. Datum of gage is 9,187 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by an earth and rockfill dam. Dam completed by U. S. Bureau of Reclamation in September 1937. Capacity of reservoir, 106,200 acre-ft between elevations 9,187 ft, bottom of outlet gates, and 9,330 ft, crest of spillway. No dead storage. Water used for irrigation in Uncompahgre Valley. Figures given are usable contents.

COOPERATION.--Records provided by Uncompahgre Valley Water Users Association.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 111,000 acre-ft, July 1, 1957, elevation, 9,332.35 ft; minimum after first filling, 8,780 acre-ft, Oct. 19-20, 1956, elevation, 9,240.70 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 103,000 acre-ft, July 14-16, elevation, 9,328.50 ft; minimum contents, 60,800 acre-ft, April 15-18, elevation, 9,304.20 ft.

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 1800, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	9,316.40	80,300	--
Oct. 31	9,313.60	75,500	-4,800
Nov. 30	9,313.10	74,700	-800
Dec. 31	9,310.70	70,800	-3,900
CAL YR 1988	-	-	-4,100
Jan. 31	9,308.60	67,500	-3,300
Feb. 28	9,307.20	65,500	-2,000
Mar. 31	9,305.50	63,000	-2,500
Apr. 30	9,306.40	64,100	+1,100
May 31	9,316.00	79,600	+15,500
June 30	9,327.40	100,800	+21,200
July 31	9,327.50	101,000	+200
Aug. 31	9,324.20	94,600	-6,400
Sept. 30	9,319.00	84,900	-9,700
WTR YR 1989	-	-	+4,600

09109000 TAYLOR RIVER BELOW TAYLOR PARK RESERVOIR, CO

LOCATION.--Lat 38°49'06", long 106°36'31", Gunnison County, Hydrologic Unit 14020001, on left bank 1,000 ft downstream from Taylor Park Reservoir Dam, 3.4 mi upstream from Lottis Creek, and 17 mi northeast of Almont.

DRAINAGE AREA.--254 mi^2.

PERIOD OF RECORD.--June 1929 to September 1934 (monthly discharges only, published in WSP 1313), October 1938 to current year.

REVISED RECORDS.--WSP 1924: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 9,169.67 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to Nov. 11, 1952, at site 1,600 ft downstream, at datum 1.00 ft, lower. Oct. 15, 1946, to May 4, 1952, supplementary nonrecording gage just downstream from reservoir outlet at different sites and datums used during winter months.

REMARKS.--Estimated daily discharges: Nov. 12 to Apr. 18. Records good. Flow regulated by Taylor Park Reservoir (station 09108500) since 1937. One small diversion for irrigation from Willow Creek upstream from reservoir. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--5 years (water years 1930-34), 156 ft^3/s; 113,000 acre-ft/yr: 51 years (water years 1939-89), 196 ft^3/s; 142,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,270 ft^3/s, July 1, 1957, gage height, 7.56 ft; no flow May 1 to July 3, 1940, May 7-22, 1942, May 5-21, 1943.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 257 ft^3/s at 1330 Sept. 1, and at 0130 Sept. 4, gage height, 3.91 ft; minimum daily, 92 ft^3/s, Nov. 10 to Dec. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	141	148	92	97	97	97	120	200	152	152	252	256
2	140	148	92	97	97	97	120	200	156	152	252	255
3	146	148	92	97	97	97	120	200	156	152	252	255
4	149	142	92	97	97	97	174	200	158	152	252	254
5	146	131	92	97	97	97	195	200	161	152	255	255
6	146	135	92	97	97	97	195	200	158	152	255	253
7	146	140	92	97	97	97	195	200	160	152	254	254
8	146	124	92	97	97	97	195	200	159	152	251	254
9	146	97	92	97	97	97	195	200	159	152	247	254
10	147	92	92	97	97	97	195	171	158	153	247	252
11	148	92	92	97	97	97	195	149	156	154	247	250
12	149	92	92	97	97	97	195	152	157	195	247	249
13	150	92	92	97	97	97	195	152	156	225	247	247
14	150	92	92	97	97	97	195	152	154	225	249	247
15	150	92	92	97	97	97	195	152	150	225	249	247
16	150	92	92	97	97	97	195	152	151	227	247	247
17	150	92	92	97	97	97	195	151	151	227	247	247
18	150	92	92	97	97	97	195	152	150	227	248	247
19	150	92	92	97	97	97	199	152	151	227	247	249
20	147	92	92	97	97	97	202	152	152	227	248	250
21	151	92	97	97	97	120	203	152	152	240	247	250
22	152	92	97	97	97	120	202	150	152	248	249	250
23	152	92	97	97	97	120	200	149	152	252	250	250
24	152	92	97	97	97	120	198	148	152	252	251	250
25	152	92	97	97	97	120	197	148	152	252	252	250
26	151	92	97	97	97	120	198	148	152	252	251	250
27	149	92	97	97	97	120	197	148	152	252	251	250
28	148	92	97	97	97	120	133	149	152	252	251	250
29	148	92	97	97	---	120	199	150	152	252	250	252
30	148	92	97	97	---	120	200	151	152	252	251	252
31	148	---	97	97	---	120	---	150	---	252	252	---
TOTAL	4598	3145	2907	3007	2716	3260	5592	5130	4625	6436	7748	7526
MEAN	148	105	93.8	97.0	97.0	105	186	165	154	208	250	251
MAX	152	148	97	97	97	120	203	200	161	252	255	256
MIN	140	92	92	97	97	97	120	148	150	152	247	247
AC-FT	9120	6240	5770	5960	5390	6470	11090	10180	9170	12770	15370	14930

CAL YR 1988 TOTAL 54941 MEAN 150 MAX 304 MIN 53 AC-FT 109000
WTR YR 1989 TOTAL 56690 MEAN 155 MAX 256 MIN 92 AC-FT 112400

09110000 TAYLOR RIVER AT ALMONT, CO

LOCATION.--Lat 38°39'52", long 106°50'41", in NW¼SE¼ sec.22, T.51 N., R.1 E., Gunnison County, Hydrologic Unit 14020001, on left bank at Almont, 15 ft downstream from bridge on State Highway 306, and 800 ft upstream from confluence with East River.

DRAINAGE AREA.--477 mi².

PERIOD OF RECORD.--July 1910 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1213: 1911. WSP 1924: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 8,010.76 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 16, 1922, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Nov. 17 to Mar. 30. Records good except for estimated daily discharges, which are poor. Flow partly regulated since September 1937 by Taylor Park Reservoir (station 09108500), 24 mi upstream from station. Diversions for irrigation of about 360 acres upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--79 years, 338 ft³/s; 244,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 3,760 ft³/s, June 9, 1920, gage height, 5.00 ft, from rating curve extended above 2,300 ft³/s; maximum gage height, 5.32 ft, July 1, 1957; minimum discharge observed before storage began in Taylor Park Reservoir, 50 ft³/s for several days in August 1913, gage height, 1.2 ft; minimum daily discharge, subsequent to completion of Taylor Park Dam, 24 ft³/s, Mar. 12, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 495 ft³/s at 0230 May 24, gage height, 2.54 ft; minimum daily, 80 ft³/s, Feb. 7-9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	211	198	128	106	103	132	179	328	436	288	382	315
2	213	199	134	110	99	127	180	329	426	277	385	313
3	210	201	135	118	99	120	183	327	415	276	369	315
4	213	199	130	120	96	120	182	327	406	273	363	314
5	217	180	130	120	90	130	214	318	418	272	359	314
6	223	183	132	120	84	140	239	312	412	273	356	312
7	223	192	130	115	80	150	257	343	396	275	350	312
8	219	187	127	112	80	156	277	349	405	273	347	320
9	218	164	125	110	80	161	287	374	395	269	339	318
10	218	148	125	114	86	166	276	385	387	266	340	313
11	216	154	125	115	91	164	275	359	383	266	339	311
12	215	149	130	108	95	156	276	353	389	294	339	316
13	213	151	130	100	100	150	272	345	387	320	339	316
14	213	152	128	103	105	142	279	345	364	319	335	311
15	211	154	125	108	105	135	292	345	352	314	334	308
16	210	143	120	110	105	135	308	329	355	310	332	307
17	210	140	120	112	107	135	320	325	365	307	331	307
18	210	138	125	107	110	136	332	318	355	305	335	293
19	210	130	125	105	110	137	351	333	350	307	330	288
20	207	130	120	109	113	147	366	355	342	307	327	317
21	207	135	120	112	110	155	377	400	340	313	327	307
22	204	138	120	113	115	160	373	430	331	332	327	300
23	204	144	116	110	120	160	370	458	319	363	327	299
24	204	140	116	112	129	160	381	472	311	377	325	298
25	204	140	116	114	137	163	386	459	304	377	319	296
26	203	132	114	108	135	170	378	422	301	377	318	296
27	203	130	114	102	133	166	369	418	296	377	317	296
28	201	130	110	102	133	172	304	431	293	379	318	296
29	199	125	108	106	---	172	330	459	293	381	316	296
30	201	125	101	106	---	172	335	470	290	380	315	296
31	199	---	102	106	---	175	---	450	---	372	316	---
TOTAL	6509	4631	3781	3408	2950	4664	8948	11693	10816	9803	10456	9209
MEAN	210	154	122	110	105	150	298	377	361	316	337	307
MAX	223	201	135	120	137	175	386	472	436	381	385	320
MIN	199	125	101	100	80	120	179	312	290	266	315	288
AC-FT	12910	9190	7500	6760	5850	9250	17750	23200	21450	19440	20740	18270

CAL YR 1988 TOTAL 84189 MEAN 230 MAX 514 MIN 101 AC-FT 167000
WTR YR 1989 TOTAL 86873 MEAN 238 MAX 472 MIN 80 AC-FT 172300

09112500 EAST RIVER AT ALMONT, CO

LOCATION.--Lat 38°39'52", long 106°50'51", in NW¼SE¼ sec.22, T.51 N., R.1 E., Gunnison County, Hydrologic Unit 14020001, on left bank at Almont, 200 ft upstream from bridge on State Highway 135, and 400 ft upstream from confluence with Taylor River.

DRAINAGE AREA.--289 mi².

PERIOD OF RECORD.--April to October 1905, July 1910 to September 1922, October 1934 to current year. Monthly discharges only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1313: 1911. WSP 1733: 1952. WSP 1924: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 8,006.29 ft above National Geodetic Vertical Datum of 1929. Apr. 16 to Sept. 30, 1905, and July 27, 1910, to Apr. 30, 1922, nonrecording gages at bridge 200 ft downstream, at different datums. Oct. 1, 1934, to Sept. 22, 1954, water-stage recorder at present site at datum 2.00 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 29 to March 23. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 7,400 acres upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--66 years (water years 1911-22, 1935-89), 340 ft³/s; 246,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 6,500 ft³/s, June 15, 1921, gage height, 6.6 ft, site and datum then in use, from rating curve extended above 2,000 ft³/s; minimum daily, 10 ft³/s, Aug. 13, 1913.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 30	0430	*1,270	*5.12				

Minimum daily, 40 ft³/s, Feb. 6, 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	73	96	46	50	62	109	431	1150	471	290	123
2	68	74	94	48	52	53	102	409	1140	438	309	119
3	72	77	84	49	50	57	101	410	1070	406	280	119
4	72	81	86	52	47	56	96	412	939	378	235	124
5	78	78	85	53	44	55	92	367	944	364	207	124
6	89	75	93	[illegible]	40	59	132	371	991	336	204	116
7	90	81	78	50	40	68	126	597	957	325	204	99
8	9[illegible]	79	76	50	42	83	176	711	1040	306	178	67
9	91	83	76	[illegible]	46	9[illegible]	249	979	961	29[illegible]	183	63
10	90	77	76	52	50	110	267	1150	961	253	184	57
11	85	83	73	54	52	118	260	11[illegible]	96[illegible]	277	198	57
12	95	80	73	52	53	110	271	1020	971	285	223	60
13	85	81	76	52	54	11[illegible]	234	866	975	288	[illegible]	63
14	84	81	72	49	55	92	269	821	993	269	233	61
15	85	76	72	47	[illegible]	87	352	71[illegible]	95[illegible]	26[illegible]	22[illegible]	59
16	91	75	68	49	55	95	439	628	997	295	210	57
17	92	91	66	[illegible]	52	83	511	571	1040	236	191	57
18	93	94	62	52	56	83	586	568	997	218	196	57
19	97	95	60	54	53	84	670	714	1000	207	197	57
20	94	99	56	56	56	85	759	895	925	190	190	62
21	82	104	55	54	58	83	930	1080	836	177	185	62
22	82	106	54	54	56	82	940	1120	677	170	180	59
23	79	107	52	52	60	90	926	1240	585	181	170	59
24	76	110	52	52	67	93	1010	1230	525	257	155	59
25	76	104	52	54	73	101	979	1230	555	251	154	59
26	79	97	50	52	75	110	887	979	550	295	150	59
27	80	95	50	49	71	110	774	974	520	258	145	58
28	79	92	50	49	66	112	625	1060	524	246	141	57
29	79	90	47	55	---	123	587	1230	507	262	[illegible]	5[illegible]
30	79	86	45	50	---	113	476	1290	487	286	123	85
31	79	---	45	48	---	101	---	1210	---	252	125	---
TOTAL	2557	2634	2044	1584	1532	2744	13815	26210	25581	8725	6055	2293
MEAN	82.5	87.8	65.9	51.1	54.7	88.5	460	845	853	281	195	76.4
MAX	93	110	96	56	75	123	1010	1290	1150	471	309	12[illegible]
MIN	68	73	45	46	40	55	92	357	487	170	123	[illegible]
AC-FT	5070	5220	4050	3140	3040	5443	27400	51990	50740	17310	[illegible]	[illegible]

CAL YR 1988 TOTAL 79166 MEAN 216 MAX 1340 MIN 45 AC-FT 157000
WTR YR 1989 TOTAL 95634 MEAN 262 MAX 1290 MIN 40 AC-FT 189800

09114500 GUNNISON RIVER NEAR GUNNISON, CO

LOCATION.--Lat 38°32'31", long 106°56'57", in NW¼NW¼ sec.2, T.49 N., R.1 W., Gunnison County, Hydrologic Unit 14020002, on right bank 0.7 mi downstream from Antelope Creek and 1.2 mi west of Gunnison.

DRAINAGE AREA.--1,012 mi².

PERIOD OF RECORD.--October 1910 to December 1928, October 1944 to current year. Monthly discharges only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1313: 1911, 1916.

GAGE.--Water-stage recorder. Elevation of gage is 7,655 ft above National Geodetic Vertical Datum of 1929, from topographic map. Nov. 25, 1910 to Dec. 31, 1928, nonrecording gages (supplementary water-stage recorder Apr. 28, 1916 to June 17, 1918) at bridge about 0.6 mi downstream at various datums. Oct. 1, 1944 to July 28, 1970, water-stage recorder at sites 0.4 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Nov. 29, 30 , Dec. 5-8, and Dec. 25 to Mar. 28. Records good except for estimated daily discharges, which are fair. Flow regulated by Taylor Park Reservoir (station 09108500), 37 mi upstream from station. Diversions for irrigation of about 22,000 acres upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--63 years (water years 1911-28, 1945-89), 767 ft³/s; 555,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 11,400 ft³/s, June 13, 1918, gage height, 4.05 ft, site and datum then in use, from rating curve extended above 5,000 ft³/s; minimum daily, 80 ft³/s, Dec. 27, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,950 ft³/s at 0730 May 30, gage height, 2.74 ft; minimum daily, 174 ft³/s, Feb. 8, 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	320	298	274	219	240	312	382	944	1680	742	736	422
2	318	298	270	230	230	300	382	898	1680	697	773	410
3	299	298	278	233	230	283	382	871	1640	659	715	415
4	294	298	252	240	224	274	396	880	1520	626	647	417
5	308	278	250	252	220	270	394	841	1590	624	607	414
6	322	266	240	250	208	290	456	821	1550	610	600	402
7	330	274	220	243	182	370	567	949	1470	586	596	373
8	333	279	225	239	174	437	638	1130	1520	548	561	340
9	328	290	228	258	174	500	760	1320	1500	544	556	337
10	326	258	210	270	197	540	750	1570	1470	521	560	326
11	324	252	243	270	202	559	735	1570	1470	520	584	326
12	319	259	223	250	220	540	750	1510	1480	500	615	329
13	314	247	220	245	230	460	730	1380	1510	[illegible]	627	[illegible]
14	317	256	244	215	230	400	715	1320	1370	544	617	335
15	321	279	240	228	230	370	831	1280	1320	547	590	331
16	324	249	213	239	223	350	980	1190	1350	541	576	319
17	326	262	210	250	220	373	1060	1130	1290	532	569	319
18	323	281	227	260	230	350	1160	1060	1340	526	564	300
19	320	284	246	260	233	350	1290	1140	1340	519	567	285
20	310	297	252	253	235	380	1320	1250	1270	509	560	302
21	297	294	221	265	233	350	1510	1410	1190	[illegible]	563	296
22	305	286	249	273	252	340	1460	1520	1100	526	554	297
23	305	299	248	279	280	340	1390	1700	985	[illegible]	526	295
24	305	308	246	270	310	360	1490	1740	991	613	489	293
25	305	304	230	262	350	400	1470	1670	984	641	482	292
26	305	305	215	250	360	418	1380	1570	887	675	474	292
27	300	303	200	250	350	400	1300	1490	845	651	467	292
28	296	293	195	267	330	390	1130	1540	835	650	466	292
29	292	275	190	262	---	389	1030	1700	800	693	460	325
30	292	272	190	250	---	375	1020	1830	777	768	455	354
31	294	---	205	240	---	354	---	1760	---	721	437	---
TOTAL	9672	8442	7193	7758	6789	11821	27855	41006	38664	18468	17584	[illegible]
MEAN	312	281	232	250	242	381	928	1323	1289	596	567	335
MAX	333	308	278	273	360	559	1510	1830	1680	768	773	422
MIN	292	247	190	215	174	270	382	821	777	505	437	285
AC-FT	19180	16740	14270	15390	13470	23450	55250	81330	76690	36630	34880	[illegible]

CAL YR 1988 TOTAL 194732 MEAN 532 MAX 2260 MIN 170 AC-FT 386300
WTR YR 1989 TOTAL 205296 MEAN 562 MAX 1830 MIN 174 AC-FT 407200

09118450 COCHETOPA CREEK BELOW ROCK CREEK, NEAR PARLIN, CO

LOCATION.--Lat 38°20'08", long 106°46'18", in SW¼NE¼ sec.17, T.47 N., R.2 E. Saguache County, Hydrologic Unit 14020003, on left bank 0.75 mi downstream from Rock Creek and 12 mi southeast of Parlin.

DRAINAGE AREA.--334 mi².

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,470 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 21 to Jan. 12, Feb. 2-15, and March 10-25. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of hay meadows upstream from station. Transmountain diversion by Tarbell ditch exports water upstream from station to Saguache Creek, since 1913. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--8 years, 56.7 ft³/s; 41,080 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,120 ft³/s, May 23, 1984, gage height, 4.49 ft; minimum daily, 8.4 ft³/s, Feb. 7, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 74 ft³/s at 0200 July 27, gage height, 2.35 ft; minimum daily, 11 ft³/s, July 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	29	22	17	18	23	40	25	22	19	32	27
2	29	29	21	17	16	23	37	22	23	17	43	26
3	29	31	21	18	16	25	36	15	24	17	30	25
4	28	31	20	17	15	27	36	15	24	17	26	25
5	27	28	21	17	14	27	32	18	25	18	27	26
6	28	28	22	17	13	25	38	20	23	17	27	27
7	32	29	22	16	12	25	45	18	19	18	26	27
8	32	25	20	15	12	30	48	19	18	20	25	25
9	32	27	19	16	13	47	47	18	19	18	33	25
10	32	26	19	17	15	60	44	19	20	17	37	25
11	31	28	19	17	17	48	38	20	22	18	41	24
12	30	30	20	17	17	43	36	20	22	20	44	24
13	29	29	21	17	17	38	35	20	23	22	43	26
14	51	28	22	17	18	36	38	21	26	17	42	26
15	53	31	21	17	19	35	37	21	27	15	39	26
16	52	28	20	17	20	35	37	21	25	14	39	25
17	51	32	20	17	20	37	37	19	25	13	38	25
18	50	31	21	17	20	36	34	17	22	12	39	24
19	49	37	21	17	21	37	36	18	22	11	40	24
20	48	24	20	17	21	40	38	16	23	13	39	31
21	48	25	20	17	21	39	37	18	22	13	38	29
22	49	26	19	17	21	38	38	20	22	14	38	25
23	48	25	18	17	22	37	38	18	22	19	35	24
24	44	24	19	17	22	39	37	15	19	32	34	24
25	39	23	19	17	22	41	37	15	17	37	32	24
26	33	22	18	17	22	45	38	15	17	34	33	23
27	31	20	17	18	22	44	36	15	18	55	32	23
28	31	22	16	18	23	41	27	16	18	34	33	23
29	27	24	14	18	---	43	25	17	18	28	31	21
30	34	23	14	18	---	37	25	19	19	28	31	21
31	31	---	16	18	---	36	---	20	---	28	30	---
TOTAL	1157	815	602	529	509	1137	1107	571	646	655	1077	750
MEAN	37.3	27.2	19.4	17.1	18.2	36.7	36.9	18.4	21.5	21.1	34.7	25.0
MAX	53	37	22	18	23	60	48	25	27	55	44	31
MIN	27	20	14	15	12	23	25	15	17	11	25	21
AC-FT	2290	1620	1190	1050	1010	2260	2200	1130	1280	1300	2140	1490

CAL YR 1988 TOTAL 11854 MEAN 32.4 MAX 98 MIN 14 AC-FT 23510
WTR YR 1989 TOTAL 9555 MEAN 26.2 MAX 60 MIN 11 AC-FT 18950

09119000 TOMICHI CREEK AT GUNNISON, CO

LOCATION.--Lat 38°31'18", long 106°56'25", in NE¼SW¼ sec.11, T.49 N., R.1 W., Gunnison County, Hydrologic Unit 14020003, on right bank 300 ft downstream from highway bridge, 1.8 mi southwest of Post Office in Gunnison, and 2.0 mi upstream from mouth.

DRAINAGE AREA.--1,061 mi².

PERIOD OF RECORD.--November and December 1910 (gage heights and discharge measurements only), October 1937 to current year. Monthly discharges only for some periods, published in WSP 1313. Published as "near Gunnison" 1910.

REVISED RECORDS.--WSP 2124: Drainage area. WDR CO-86-2: 1985.

GAGE.--Water-stage recorder. Datum of gage is 7,628.58 ft above National Geodetic Vertical Datum of 1929. Nov. 25 to Dec. 24, 1910, nonrecording gage 300 ft upstream at different datum. Apr. 20, 1938, to Oct. 2, 1940, water-stage recorder at present site at datum 1.00 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 28 to March 29. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 24,000 acres upstream from station. Water diverted upstream from station by Larkspur ditch to Arkansas River basin since 1935 and by Tarbell ditch to Rio Grande basin since 1914. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--52 years (water years 1938-89), 176 ft³/s; 127,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,620 ft³/s, May 23, 1984, gage height, 5.49 ft; minimum daily, 2.6 ft³/s, Sept. 30, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 790 ft³/s at 0230 Aug. 1, gage height, 3.43 ft, from maximum indicator; minimum daily, 41 ft³/s, Sept. 4-6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	96	93	80	78	170	181	109	133	52	330	55
2	73	99	89	77	76	160	177	108	125	52	201	47
3	71	103	91	78	74	140	193	103	131	53	179	42
4	70	105	88	78	70	134	185	85	148	51	151	41
5	70	99	88	80	68	130	154	77	156	43	132	41
6	73	91	91	78	62	190	164	72	158	47	125	41
7	78	92	87	74	58	212	195	70	155	47	125	42
8	81	100	84	73	58	323	222	69	151	49	109	43
9	82	108	91	76	62	370	237	64	163	49	97	44
10	83	114	82	80	70	405	223	91	161	49	106	43
11	83	103	79	80	84	370	201	115	161	53	113	44
12	80	112	77	74	84	334	191	108	187	55	119	47
13	79	108	94	70	79	280	136	126	283	69	118	53
14	82	117	95	70	78	260	186	135	221	69	121	56
15	104	130	80	74	75	253	189	149	181	71	114	54
16	111	105	75	78	76	250	189	148	155	65	107	52
17	109	92	80	78	79	237	192	148	138	62	96	50
18	107	111	86	80	82	248	195	135	134	57	102	50
19	106	103	83	80	87	257	199	139	115	56	103	49
20	103	95	80	78	91	250	209	95	113	62	95	63
21	103	87	77	77	88	240	216	100	113	55	90	75
22	102	90	77	76	92	252	212	114	122	83	92	67
23	101	105	80	77	107	252	197	125	116	72	86	63
24	98	115	80	80	121	265	189	142	112	75	83	55
25	93	120	76	80	154	268	175	147	110	131	74	59
26	90	113	72	76	180	255	158	143	77	163	59	59
27	90	112	69	74	180	237	159	137	73	170	64	59
28	90	102	72	74	180	230	145	141	67	169	61	59
29	89	106	75	76	---	205	124	141	57	157	57	63
30	83	100	78	78	---	202	116	149	54	147	56	58
31	97	---	80	78	---	198	---	149	---	186	57	---
TOTAL	2761	3133	2539	2382	2594	7514	5547	3604	4060	2612	3433	1577
MEAN	89.1	104	81.9	76.8	92.6	242	185	116	135	84.3	111	52.6
MAX	111	130	95	80	180	405	237	149	283	191	330	75
MIN	70	87	69	70	58	130	116	64	54	47	56	41
AC-FT	5480	6210	5040	4720	5150	14900	11000	7150	8050	5180	6810	3130

CAL YR 1988 TOTAL 43097 MEAN 118 MAX 304 MIN 42 AC-FT 85480
WTR YR 1989 TOTAL 41756 MEAN 114 MAX 405 MIN 41 AC-FT 82820

09124500 LAKE FORK AT GATEVIEW, CO

LOCATION.--Lat 38°17'56", long 107°13'46", in SE¼NE¼ sec.29, T.47 N., R.3 W., Gunnison County, Hydrologic Unit 14020002, on left bank at old village of Gateview, 25 ft downstream from private bridge, 0.2 mi upstream from Indian Creek, and 6.3 mi upstream from waterline of Blue Mesa Reservoir, at elevation 7,519 ft.

DRAINAGE AREA.--334 mi².

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,827.66 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1938, at datum 2.00 ft, higher, and Oct. 1, 1938, to Sept. 30, 1945, at datum 1.00 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 28 to Mar. 27. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 1,600 acres upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--52 years, 239 ft³/s, 173,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,720 ft³/s, July 10, 1983, gage height, 4.18 ft; minimum daily, 22 ft³/s, Jan. 21, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)
May 30	0300	*814	*2.30

Minimum daily, 39 ft³/s, Feb. 8, 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114	69	54	55	53	66	83	154	573	328	295	82
2	113	68	56	55	58	66	81	145	552	317	359	80
3	109	67	62	58	56	64	89	137	514	302	316	79
4	107	63	60	55	55	62	84	134	462	289	269	77
5	110	61	59	56	52	70	80	126	452	282	236	79
6	113	62	61	59	47	84	82	132	527	275	211	78
7	116	63	62	60	43	96	92	163	503	258	192	76
8	112	62	61	53	39	120	111	218	568	251	176	76
9	110	70	62	55	39	145	124	331	557	238	165	75
10	112	67	60	54	41	150	124	386	525	229	162	73
11	110	69	62	52	42	140	126	381	491	244	160	73
12	105	63	64	54	43	135	128	358	568	271	162	76
13	104	60	68	54	44	120	128	318	498	264	155	83
14	101	65	70	53	44	111	126	303	452	239	145	79
15	100	69	70	53	44	103	126	283	469	218	141	76
16	98	51	68	53	44	98	133	256	593	195	137	73
17	94	58	66	55	45	96	142	235	665	182	129	70
18	92	57	63	56	47	96	158	217	658	174	137	69
19	90	[illegible]	70	58	50	93	175	252	649	164	139	67
20	88	[illegible]	66	57	49	100	192	360	574	154	128	75
21	87	62	66	57	48	96	228	497	541	150	132	78
22	83	66	66	57	50	95	256	544	424	148	129	74
23	80	73	66	58	56	95	253	628	368	195	121	73
24	78	76	64	58	67	100	264	679	343	229	115	71
25	77	67	64	58	74	96	259	630	366	228	105	70
26	74	63	60	60	78	92	255	558	356	261	98	67
27	73	55	62	60	74	92	233	575	344	268	94	67
28	72	55	60	58	68	88	205	667	337	260	93	67
29	71	55	58	56	---	88	187	739	330	250	89	66
30	76	54	53	56	---	84	169	756	328	253	85	67
31	74	---	53	56	---	76	---	644	---	235	85	---
TOTAL	2941	1880	1935	1745	1454	3018	4693	11806	14587	7364	4959	2216
MEAN	94.9	62.7	62.4	56.3	51.9	97.4	156	381	486	238	160	73.9
MAX	116	76	70	60	78	150	264	756	665	328	359	83
MIN	71	51	53	52	39	62	80	126	328	148	85	66
AC-FT	5830	3730	3840	3460	2880	5990	9310	23420	28930	14610	9840	4400

CAL YR 1988 TOTAL 65846 MEAN 180 MAX 1220 MIN 36 AC-FT 130600
WTR YR 1989 TOTAL 58598 MEAN 161 MAX 756 MIN 39 AC-FT 116200

09125800 SILVER JACK RESERVOIR NEAR CIMARRON, CO

LOCATION.--Lat 38°13'58", long 107°32'28", in T.46 N., R. 6 W., Gunnison County, Hydrologic Unit 14020002, in gate house of Silver Jack Dam on Cimarron River, 14.5 mi south of Cimarron, Co.

DRAINAGE AREA.--59 mi^2

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by an earthfill dam. Storage began in Decemeber 1970; dam completed December 1971. Capacity, 13,520 acre-ft, 1971 survey, between elevation 8,800.0 ft, streambed at dam, and 8,925.6 ft, crest of spillway. Dead storage below elevation 8,836.0, 520 acre-ft. Figures given are live contents.

COOPERATION.--Capacity tables provided by U.S. Bureau of Reclamation.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 13,200 acre-ft, May 30, elevation, 8,926.26 ft; minimum contents, 4,050 acre-ft, Sept. 17, elevation, 8,883.60 ft.

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 2400 WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	8,888.62	4,820	--
Oct. 31.	8,885.64	4,350	-470
Nov. 30.	8,886.99	4,560	+210
Dec. 31.	8,889.78	5,000	+440
CAL YR 1988	-	-	+2,240
Jan. 31.	8,891.63	5,310	+310
Feb. 28.	8,893.15	5,570	+260
Mar. 31.	8,896.73	6,210	+640
Apr. 30.	8,916.03	10,400	+4,190
May 31.	8,926.02	13,130	+2,730
June 30.	8,923.92	12,520	-610
July 31.	8,912.31	9,600	-2,920
Aug. 31.	8,895.95	6,070	-3,530
Sept. 30.	8,886.07	4,420	-1,650
WTR YR 1989	-	-	-400

09126000 CIMARRON RIVER NEAR CIMARRON, CO

LOCATION.--Lat 38°15'36", long 107°32'43", in NW¼NE¼ sec.8, T.46 N., R.6 W., Gunnison County, Hydrologic Unit 14020002, on right bank 100 ft upstream from Forest Service bridge, 0.6 mi upstream from headgate on Cimarron ditch, 2.1 mi downstream from Silver Jack Dam, and 13 mi south of Cimarron.

DRAINAGE AREA.--66.6 mi².

PERIOD OF RECORD.--October 1954 to current year. Prior to October 1965, published as Cimarron Creek near Cimarron.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 8,631.48 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 12, 1972, at site 0.2 mi downstream, at different datum.

REMARKS.--Estimated daily discharges: Nov. 20 to Apr. 20. Records good except for estimated daily discharges, which are poor. Diversion upstream from station through Owl Creek ditch into Uncompahgre River basin. Flow regulated by Silver Jack Dam, 2.1 mi upstream since Dec. 23, 1970, total capacity, 13,520 acre-ft. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--16 years (water years 1955-70), 38.6 ft³/s; 64,190 acre-ft/yr, prior to completion of Silver Jack Dam: 19 years (water years 1971-89), 97.3 ft³/s; 70,490 acre-ft/yr, subsequent to completion of Silver Jack Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,790 ft³/s, June 28, 1957, gage height, 8.32 ft, site and datum then in use; no flow Dec. 24, 1970, to Jan. 9, 1971 (result of storage in Silver Jack Dam); minimum daily prior to construction of Silver Jack Dam, 8.0 ft³/s, Dec. 27-28, 1962, Jan. 13, 1963; minimum daily, 4.4 ft³/s, Apr. 20-21, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 449 ft³/s at [illegible] June 6, gage height, 4.26 ft, minimum daily, 8.0 ft³/s, Feb. 7, 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	[illegible]	[illegible]	[illegible]	11	[illegible]	18	[illegible]	279	96	105	76
2	19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	18	[illegible]	[illegible]	96	104	76
3	34	23	11	11	[illegible]	[illegible]	17	61	214	96	103	76
4	44	21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	96	102	76
5	43	21	[illegible]	[illegible]	[illegible]	14	[illegible]	[illegible]	136	93	102	76
6	35	21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	97	104	75
7	29	19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	96	104	75
8	23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	96	104	75
9	28	18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	96	102	75
10	28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	97	102	75
11	28	19	11	11	11	[illegible]	[illegible]	[illegible]	[illegible]	93	102	74
12	30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	93	[illegible]	74
13	28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	93	100	74
14	27	17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	91	73
15	27	[illegible]	11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	81	73
16	27	17	11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	78	74
17	27	14	11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18	27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19	27	15	[illegible]	11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20	27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	26	[illegible]	10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
22	26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	25	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	25	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31	[illegible]	---	[illegible]	[illegible]	---	[illegible]	---	[illegible]	---	[illegible]	[illegible]	---
TOTAL	863	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MEAN	27.8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAX	44	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIN	19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AC-FT	1710	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CAL YR 1988 TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN [illegible]
WTR YR 1989 TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN [illegible]

09128000 GUNNISON RIVER BELOW GUNNISON TUNNEL, CO

LOCATION.--Lat 38°31'45", long 107°38'54", in NE¼NW¼ sec.10, T.49 N., R.7 W., Montrose County, Hydrologic Unit 14020002, on left bank 0.4 mi downstream from east portal of Gunnison tunnel, 4.7 mi downstream from Crystal Creek, and 12 mi northeast of Montrose.

DRAINAGE AREA.--3,965 mi².

PERIOD OF RECORD.--October 1903 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "at east portal of Gunnison tunnel" 1905-6 and as "at River portal" 1907-11.

REVISED RECORDS.--WSP 1313: 1906(M). WSP 1733: 1918-19, 1948. WSP 2124: Drainage area. WDR CO-77-2: 1926, 1941.

GAGE.--Water-stage recorder. Datum of gage is 6,526.06 ft above National Geodetic Vertical Datum of 1929. Apr. 9, 1905, to Aug. 20, 1915, nonrecording gage at site 300 ft upstream from diversion dam at east portal of Gunnison tunnel, at different datum. Aug. 21, 1915, to Jan. 19, 1943, nonrecording gage at site 500 ft downstream from diversion dam at east portal of Gunnison tunnel, at different datum. Jan. 20, 1943, to Sept. 30, 1956, water-stage recorder at present site at datum 1.0 ft, higher.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by transmountain diversions, transbasin diversion through Gunnison tunnel for irrigation of about 75,000 acres in Uncompahgre Valley (see table below for figures of diversion), Taylor Park Reservoir (station 09108500), Blue Mesa Reservoir (station 09124600), Morrow Point Reservoir (station 09125400), Crystal Reservoir (station 09127600), diversions for irrigation of about 63,000 acres, and return flow from irrigated areas. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

COOPERATION.--Diversions, in acre-feet, through Gunnison tunnel; provided by Uncompahgre Valley Water Users Association.

AVERAGE DISCHARGE.--86 years, 1,384 ft³/s; 1,003,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 19,000 ft³/s, June 15, 1921, gage height, about 15.8 ft, present datum, from rating curve extended above 14,000 ft³/s; no flow Sept. 25-26, 1936, Oct. 8, 1949, Sept. 5-6, 15-16, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,120 ft³/s at 1300 Mar. 16, gage height, 4.89 ft; minimum daily, 264 ft³/s, Dec. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	710	330	394	292	331	331	296	346	340	366	344	448
2	715	334	401	282	331	331	296	346	342	369	346	451
3	499	366	456	287	331	334	296	353	348	365	347	458
4	356	361	458	302	331	334	288	346	346	373	337	458
5	390	359	476	300	327	334	335	375	344	369	340	456
6	406	359	489	291	324	334	375	342	350	367	340	451
7	385	366	362	286	324	338	382	350	346	369	341	444
8	376	342	314	295	324	334	385	343	341	369	338	442
9	376	342	310	306	324	332	376	345	356	374	334	445
10	373	341	355	331	327	331	379	344	342	369	343	450
11	373	335	388	331	327	331	331	341	345	373	344	446
12	373	338	381	331	327	331	300	338	354	372	341	444
13	373	341	338	331	327	332	315	340	343	376	343	447
14	376	345	297	331	327	334	303	344	340	368	341	449
15	360	345	283	331	329	648	302	342	347	372	344	455
16	359	341	291	304	331	1590	301	346	353	370	345	453
17	355	340	330	269	308	791	303	346	347	364	339	462
18	355	338	352	332	271	367	323	343	359	363	518	424
19	353	338	338	369	299	366	341	343	355	363	379	424
20	352	338	310	370	324	304	355	335	358	357	396	425
21	363	338	267	373	326	296	337	345	356	359	384	420
22	342	339	264	373	327	368	348	339	355	367	392	420
23	342	338	296	362	327	389	336	349	353	359	389	420
24	341	338	331	352	327	317	351	341	344	364	407	420
25	341	334	334	345	327	315	346	342	358	370	439	463
26	380	326	334	336	330	317	346	340	332	377	449	490
27	371	324	306	334	331	311	345	339	341	353	452	492
28	313	324	278	334	331	355	349	340	343	346	452	492
29	310	286	279	334	---	345	347	336	336	342	449	492
30	310	349	282	329	---	303	349	331	353	342	448	494
31	345	---	282	326	---	297	---	337	---	343	449	---
TOTAL	11973	10194	10576	10049	9069	12342	10036	10647	10424	11290	11797	13535
MEAN	386	340	341	324	324	398	335	343	347	364	381	451
MAX	715	366	489	373	331	1590	385	375	359	377	518	494
MIN	310	286	264	269	271	296	288	331	332	342	334	420
AC-FT	23750	20220	20980	19930	17990	24480	19910	21120	20680	22390	23400	26850
a	35843	0	0	0	0	0	53700	64450	63320	69440	72110	64620

CAL YR 1988 TOTAL 264229 MEAN 722 MAX 1890 MIN 264 AC-FT 524100
WTR YR 1989 TOTAL 131932 MEAN 361 MAX 1590 MIN 264 AC-FT 261700

a-Diversions, in acre-feet, through Gunnison Tunnel, provided by Uncompahgre Valley Water Users Association.

09128500 SMITH FORK NEAR CRAWFORD, CO

LOCATION.--Lat 38°43'40", long 107°30'22", in SW¼SE¼ sec.24, T.15 S., R.91 W., Delta County, Hydrologic Unit 14020002, on left bank 20 ft upstream from Forest Service bridge, 0.4 mi upstream from Second Creek, 6 mi northeast of Crawford, and 6.5 mi upstream from Iron Creek.

DRAINAGE AREA.--42.8 mi².

PERIOD OF RECORD.--October 1935 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1313: 1941. WDR CO-83-2: Drainage area. WDR CO-85-2: 1984, 1984 (M).

GAGE.--Water-stage recorder. Elevation of gage is 7,091 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 16, 1938, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Nov. 18-22, Nov. 26 to Dec. 14, Dec. 16 to Feb. 26, Feb. 28 to Mar. 1, Mar. 3-7, Apr. 1-28, May 1-24, May 28 to June 7, and Sept. 12-17. Records fair except for estimated daily discharges, which are poor. Diversions for irrigation of a few small hay meadows upstream from station. Saddle Mountain ditch diverts water upstream from station for irrigation of about 800 acres downstream. One small ditch diverts water from Virginia Creek to Iron Creek drainage. Head and Ferrier ditch imports water from Curecanti Creek drainage. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--54 years, 42.3 ft³/s; 30,650 acre-ft/yr. The figures published in the 1985 report were in error; the correct figures are: 49 years, 41.9 ft³/s, 30,360 acre-ft/yr; 50 years, 42.4 ft³/s, 30,720 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,410 ft³/s, May 15, 1984, gage height, 8.29 ft, but may have been higher during period of indefinite stage-discharge relationship, May 16-21, 1984; minimum daily discharge, 1.8 ft³/s, July 30-31, Aug. 1, 1963, Sept. 5-6, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 260 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
a	----	*160	*2.64				

Minimum daily, 4.4 ft³/s, Sept. 16, 17.
a Sometime during period Mar. 31 to Apr. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	7.5	6.8	7.0	6.0	13	33	74	70	17	6.3	5.4
2	9.4	7.7	6.8	7.0	5.8	13	36	72	64	16	6.9	5.3
3	8.5	7.4	6.6	5.4	5.0	10	36	72	57	15	6.4	4.7
4	8.6	7.2	6.6	6.2	5.8	11	35	73	56	14	7.0	4.7
5	9.1	6.9	6.8	6.2	5.6	12	35	71	57	13	7.3	4.8
6	9.9	6.8	6.6	6.2	5.4	13	53	81	50	12	7.0	4.7
7	10	6.9	6.4	5.8	5.0	13	80	93	48	12	6.7	4.5
8	9.6	7.3	6.4	6.4	6.4	16	120	110	46	11	7.0	5.0
9	9.5	11	6.4	6.8	4.8	23	120	120	46	11	7.2	5.6
10	9.4	9.4	6.2	6.7	6.1	29	110	110	47	10	7.2	5.4
11	9.3	9.4	6.0	5.8	5.5	27	130	98	44	10	8.1	5.2
12	9.3	9.3	6.2	6.0	5.6	31	130	88	44	10	9.1	5.2
13	9.3	8.7	6.4	6.4	5.6	32	94	84	57	9.6	8.6	5.2
14	9.3	8.9	6.6	7.6	5.3	33	94	82	47	9.5	7.9	4.8
15	9.0	11	6.8	5.4	5.6	29	92	82	45	7.7	7.8	4.8
16	9.1	8.8	6.6	5.8	5.6	25	92	80	47	7.2	7.7	4.4
17	8.9	8.9	6.4	8.4	5.6	25	96	80	48	6.1	6.9	4.4
18	8.8	8.5	6.4	6.6	5.6	24	100	82	45	5.3	9.1	5.2
19	8.7	8.5	6.6	6.6	6.0	24	110	86	44	5.4	8.1	5.3
20	8.5	8.0	6.6	6.8	5.8	25	120	96	42	5.6	[illegible]	9.0
21	7.8	7.8	6.4	7.0	5.8	23	130	120	40	5.5	8.7	8.5
22	7.5	7.5	6.4	6.6	5.6	22	150	140	35	5.1	7.9	7.4
23	7.5	7.2	6.4	5.6	6.4	26	150	130	32	5.4	7.0	7.2
24	7.4	7.4	6.6	6.2	7.6	31	130	110	28	6.5	6.6	6.9
25	7.3	7.4	6.0	6.0	10	37	120	93	26	7.0	6.4	6.7
26	7.4	6.4	5.8	5.8	12	41	110	81	24	7.9	6.1	6.2
27	7.5	7.0	7.0	6.8	12	41	106	62	22	7.7	6.1	6.2
28	7.6	6.8	6.4	5.8	12	41	92	60	20	7.1	5.9	5.7
29	7.6	6.6	6.2	6.0	---	45	85	62	19	7.0	5.4	5.7
30	7.9	6.4	7.6	6.6	---	41	80	68	18	6.8	5.3	5.7
31	7.8	---	7.8	6.0	---	40	---	72	---	6.0	5.9	---
TOTAL	267.5	236.5	202.8	198.0	183.6	816	2811	2732	1259	278.3	221.1	168.2
MEAN	8.63	7.88	6.54	6.39	6.56	26.3	93.7	88.1	42.0	8.98	7.13	5.61
MAX	10	11	7.8	8.4	12	45	150	140	70	17	9.1	9.0
MIN	7.3	6.4	5.8	5.4	4.8	10	35	60	18	5.1	5.3	4.4
AC-FT	531	469	402	393	364	1620	5580	5420	2500	552	439	334

CAL YR 1988 TOTAL 9956.8 MEAN 27.2 MAX 171 MIN 2.5 AC-FT 19750
WTR YR 1989 TOTAL 9374.0 MEAN 25.7 MAX 150 MIN 4.4 AC-FT 18590

09131495 PAONIA RESERVOIR NEAR BARDINE, CO

LOCATION.--Lat 38°56'39", long 107°21'06", in NE¼ sec.8, T.13 S., R.89 W., Gunnison County, Hydrologic Unit 14020004, in gate house of Paonia Dam on Muddy Creek, 16 mi east of Paonia.

DRAINAGE AREA.--246 mi²

PERIOD OF RECORD.--December 1961 to current year. Monthend active contents provided by U.S. Bureau of Reclamation from December 1961 to September 1987.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by an earthfill dam. Storage began in December 1961; dam completed January 1962. Capacity 20,950 acre-ft, 1966 survey, between elevation 6,290.0 ft streambed at dam, and 6,447.5 ft, crest of spillway. Dead storage below elevation 6,358.0 ft, 2,440 acre-ft. Inactive storage below elevation 6,360.0 ft, 2,620 acre-ft. Figures published prior to 1988 water year are active contents; figures given beginning 1988 water year are live contents.

COOPERATION.--Capacity tables provided by U.S. Bureau of Reclamation.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 18,743 acre-ft, May 29-31, elevation, 6,443.18 ft; minimum contents, 925 acre-ft, Sept. 13, elevation, 6,367.55 ft.

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	6,386.30	3,463	--
Oct. 31.	6,389.[illegible]	3,849	+383
Nov. 30.	6,39[illegible]	4,289	+440
Dec. 31.	[illegible]	4,583	+299
CAL YR 1988	-	-	-7[illegible]
Jan. 31.	[illegible]	4,[illegible]	+[illegible]
Feb. 28.	[illegible]	[illegible]	+[illegible]
Mar. 31.	[illegible]	[illegible]	-1,[illegible]
Apr. 30.	[illegible]	[illegible]	+[illegible]
May 31.	[illegible]	[illegible]	+1[illegible]
June 30.	[illegible]	[illegible]	-[illegible]
July 31.	[illegible]	[illegible]	-[illegible]
Aug. 31.	[illegible]	[illegible]	-[illegible]
Sept. 30.	[illegible]	[illegible]	-[illegible]
WTR YR 1989	-	-	[illegible]

09132500 NORTH FORK GUNNISON RIVER NEAR SOMERSET, CO

LOCATION.--Lat 38°55'33", long 107°26'01", in SE¼SW¼ sec.10, T.13 S., R.90 W., Gunnison County, Hydrologic Unit 14020004, on left bank 2.3 mi east of Somerset and 4.8 mi upstream from Hubbard Creek.

DRAINAGE AREA.--526 mi².

PERIOD OF RECORD.--October 1933 to current year. Monthly discharge only for some periods, published in WSP 1313. Water-quality data available, October 1977 to September 1982. Sediment data available, November 1978 to September 1982.

REVISED RECORDS.--WSP 2124: Drainage area. WDR CO-77-2: 1976.

GAGE.--Water-stage recorder. Elevation of gage is 6,280 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1,1982, at various sites 0.8 mi downstream, at different datums. See WDR CO-81-2, for history of changes.

REMARKS.--Estimated daily discharges: Nov. 20-22, Nov. 28 to Dec. 3, and Dec. 7 to Mar. 7. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by small diversions for irrigation in nearby drainage areas, irrigation of about 3,000 acres upstream from station, storage in Overland Reservoir, capacity, 6,280 acre-ft, and storage in Paonia Reservoir, capacity, 18,300 acre-ft, since February 1962.

AVERAGE DISCHARGE.--56 years, 459 ft³/s; 332,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,220 ft³/s, May 24, 1984, gage height, 8.20 ft, from outside high-water mark; minimum daily, 17 ft³/s, Nov. 10, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,080 ft³/s at 2400 Apr. 21, gage height, 4.81 ft; minimum daily, 54 ft³/s, Oct. 25, 26, and Nov. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	56	58	92	84	86	205	472	1150	295	216	217
2	79	56	60	92	82	86	206	448	1110	275	232	224
3	78	56	76	92	80	90	312	430	1050	257	226	224
4	81	56	94	92	76	100	659	418	929	241	206	219
5	82	56	99	92	72	110	752	421	901	229	215	220
6	84	56	99	92	70	130	620	538	947	239	223	223
7	84	57	100	92	70	150	392	793	871	239	220	226
8	84	58	110	92	74	173	619	1050	929	249	224	226
9	84	95	110	92	80	218	799	1290	909	259	228	223
10	84	86	110	90	90	275	998	1440	911	250	228	222
11	84	75	110	90	110	305	1080	1430	891	243	239	216
12	84	75	110	90	110	305	1080	1300	857	255	237	210
13	84	75	100	90	100	261	860	1040	864	257	116	149
14	84	75	100	90	90	226	798	906	828	245	169	72
15	84	112	100	90	80	185	893	739	771	259	202	66
16	84	82	96	90	80	164	1070	749	831	257	218	64
17	77	75	96	90	80	161	1280	910	845	247	223	62
18	66	72	100	90	80	157	1410	929	793	244	238	63
19	63	56	100	90	86	155	1550	1150	770	237	237	64
20	63	54	100	90	90	311	1710	1340	675	236	231	71
21	63	56	98	90	90	474	1900	1540	609	231	228	71
22	63	64	98	88	90	474	1990	1530	504	235	228	67
23	60	83	98	88	94	488	1960	1610	493	240	217	63
24	58	79	96	88	100	534	1980	1550	426	239	213	63
25	54	72	96	88	110	556	1820	1490	393	239	221	61
26	54	68	96	88	110	590	1560	1170	382	247	223	61
27	55	59	94	86	96	590	1070	1160	359	236	220	60
28	56	58	94	86	90	390	748	1230	338	230	219	60
29	56	58	94	86	---	252	617	1320	336	235	218	60
30	56	58	94	86	---	242	544	1360	319	229	222	60
31	56	---	92	86	---	212	---	1250	---	213	215	---
TOTAL	2224	2038	2978	2778	2464	8450	31482	33003	21981	7587	6752	3887
MEAN	71.7	67.9	96.1	89.6	88.0	273	1049	1065	733	245	218	130
MAX	84	112	110	92	110	590	1990	1610	1150	295	239	226
MIN	54	54	58	86	70	86	205	418	319	213	116	60
AC-FT	4410	4040	5910	5510	4890	16760	62440	65460	43600	15050	13390	7710

CAL YR 1988 TOTAL 113358 MEAN 310 MAX 1560 MIN 54 AC-FT 224800
WTR YR 1989 TOTAL 125624 MEAN 344 MAX 1990 MIN 54 AC-FT 249200

134000 MINNESOTA CREEK NEAR PAONIA, CO

LOCATION.--Lat 38°52'12", long 107°30'13", in SE¼NE¼ of sec.1, T. 14 S., R. 91 W., Delta County, Hydrologic Unit 14020004, on right bank .25 mi downstream from South Fork, 6 mi upstream from mouth, and 4.5 mi east of Paonia.

DRAINAGE AREA.--41.3 mi².

PERIOD OF RECORD.--April 1936 to September 1947, October 1985 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,200 ft above National Geodetic Vertical Datum of 1929, from topographic map. April 1936 to October 1941, staff gages at different datums. October 1941 to September 1947, water-stage recorder at different datum. December 1985 to present, water-stage recorder, datum lowered 2.0 ft.

REMARKS.--Estimated daily discharges: Dec. 2-6, 8-10, 13, 14, 17, 20-28, Jan. 2-6, 9-12, Jan. 24 to Feb. 9, Feb. 28 to Mar. 6, and Sept. 24-30. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by two small storage reservoirs, one of which obtains water from the East Muddy Creek Basin. Small trans-basin diversion from Coal Creek into Minnesota Creek. Diversions upstream from station for irrigation of about 100 acres. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--15 years (water years 1936-47, 1986-89), 24.1 ft³/s; 17,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 356 ft³/s, July 10, 1936 (gage height, 3.00 ft, site and datum then in use); minimum daily, 2.7 ft³/s, Nov. 18, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 60 ft³/s at 1230 May 11, gage height, 1.75 ft, from maximum indicator; minimum daily, 2.1 ft³/s, Nov. 27, 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	2.6	4.5	3.8	3.5	3.2	13	25	38	29	16	9.6
2	4.2	2.7	3.4	3.5	3.4	2.9	11	24	34	28	12	4.0
3	4.2	2.7	3.3	3.8	3.3	3.0	12	23	36	28	7.5	3.3
4	4.3	2.7	3.4	3.7	2.9	2.8	11	23	36	27	7.1	3.5
5	4.4	2.5	3.3	4.0	2.2	2.5	11	23	36	27	6.9	3.2
6	4.6	2.5	3.4	3.8	2.2	4.0	15	25	35	26	6.8	3.1
7	4.6	2.6	3.7	3.4	2.3	4.8	20	31	34	22	15	3.0
8	4.4	2.8	3.2	3.1	2.3	9.2	23	39	32	26	18	3.2
9	4.3	4.4	3.0	3.5	2.8	12	24	44	33	25	18	3.5
10	4.3	3.0	3.2	3.9	3.0	13	22	51	32	24	18	3.6
11	3.9	3.6	3.3	3.9	3.4	13	18	53	32	24	18	3.6
12	3.7	3.1	3.3	3.6	3.1	13	15	46	32	22	11	3.7
13	3.5	3.1	3.6	3.5	3.0	16	14	43	34	18	6.8	4.7
14	3.3	3.3	3.6	3.2	2.7	12	16	40	31	18	6.4	3.9
15	3.3	4.4	3.7	3.8	2.6	8.5	19	36	30	20	6.5	3.7
16	3.1	2.5	3.5	3.6	2.3	9.6	24	34	31	18	6.1	3.5
17	3.0	3.3	3.3	3.4	3.0	10	28	30	30	18	14	3.4
18	3.1	2.7	3.7	3.4	3.1	8.7	30	32	29	18	18	3.6
19	3.0	2.3	4.1	3.4	2.9	11	28	37	32	17	17	3.4
20	3.1	2.5	3.8	3.5	2.9	11	32	41	38	17	16	5.9
21	3.1	2.6	3.5	3.5	2.7	8.4	36	45	37	17	16	4.2
22	3.0	2.9	3.4	3.5	2.6	9.8	38	44	35	17	9.2	3.7
23	3.0	3.0	3.7	3.5	2.9	14	28	46	32	17	5.8	3.5
24	3.0	2.4	3.5	3.5	3.7	15	34	46	29	17	5.6	3.4
25	3.1	2.3	3.7	3.5	4.4	15	35	48	28	17	5.4	3.2
26	2.8	2.3	3.5	2.9	4.5	16	32	43	24	17	5.3	3.0
27	2.4	2.1	3.3	2.9	4.1	15	32	41	22	16	10	2.9
28	2.3	2.1	3.1	3.4	3.4	14	30	41	28	16	13	2.9
29	2.3	2.4	3.6	3.4	---	14	28	41	31	17	13	2.9
30	2.4	2.3	3.6	3.1	---	11	26	41	30	16	11	2.9
31	2.3	---	3.7	3.4	---	10	---	40	---	15	6.7	---
TOTAL	106.4	83.7	108.9	108.4	85.2	312.4	705	1176	961	634	346.1	112.0
MEAN	3.43	2.79	3.51	3.50	3.04	10.1	23.5	37.9	32.0	20.5	11.2	3.73
MAX	4.6	4.4	4.5	4.0	4.5	16	38	53	38	29	18	9.6
MIN	2.3	2.1	3.0	2.9	2.2	2.5	11	23	22	15	5.3	2.9
AC-FT	211	166	216	215	169	620	1400	2330	1910	1260	686	222

CAL YR 1988 TOTAL 4713.0 MEAN 12.9 MAX 62 MIN 2.1 AC-FT 9350
WTR YR 1989 TOTAL 4739.1 MEAN 13.0 MAX 53 MIN 2.1 AC-FT 9400

09135900 LEROUX CREEK AT HOTCHKISS, CO

LOCATION.--Lat 38°47'53", long 107°43'53", in NW¼NE¼ sec.36, T.14 S., R.93 W., Delta County, Hydrologic Unit 14020004, on left bank at upstream side of culvert, 0.3 mi west of Hotchkiss city limits, and 0.5 mi upstream from mouth.

DRAINAGE AREA.--66.7 mi².

PERIOD OF RECORD.--June 1976 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,315 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 20-29, Oct. 31 to Nov. 2, Nov. 5-13, and Nov. 15 to Mar. 30. Records fair except for estimated daily discharges, which are poor. Natural flow of stream is affected by diversions upstream from station for irrigation and by return flow from irrigated area upstream from station. Mostly return flow after June. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--13 years, 32.7 ft³/s; 23,690 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,880 ft³/s, June 7, 1984, gage height, 11.82 ft; minimum daily, 0.55 ft³/s, July 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 200 ft³/s at 0100 May 10, gage height, 4.54 ft; minimum daily, 1.9 ft³/s, Apr. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	16	8.0	7.8	7.6	10	3.5	3.0	2.8	3.8	3.3	7.0
2	9.2	17	8.0	7.8	7.4	7.2	3.4	2.9	2.8	3.8	3.3	6.9
3	8.8	15	7.8	6.4	7.4	6.5	3.3	2.9	2.9	3.8	3.3	7.0
4	8.4	14	7.8	7.2	7.6	5.5	3.4	3.0	3.2	3.9	3.2	7.8
5	8.2	14	8.0	7.2	7.4	5.0	3.3	3.0	3.2	3.8	3.3	7.9
6	7.3	13	7.8	7.2	7.0	4.5	3.6	3.4	3.0	3.9	3.3	7.6
7	8.1	13	7.6	6.8	6.8	4.0	16	25	2.7	3.9	3.6	7.3
8	10	14	7.6	7.2	8.2	4.0	33	30	2.5	4.1	3.4	7.3
9	10	14	7.6	7.6	6.6	4.0	47	86	3.2	3.9	3.2	7.5
10	12	14	7.2	7.0	6.6	3.5	28	126	3.2	4.0	3.3	7.8
11	12	14	7.2	6.6	7.0	4.0	12	69	3.0	3.7	3.4	7.8
12	13	12	7.4	6.8	7.0	3.5	6.3	41	3.0	3.0	13	7.6
13	14	10	7.2	7.2	6.8	3.5	16	3.4	2.8	2.9	11	7.6
14	15	8.6	7.6	8.4	7.0	3.5	42	3.2	2.6	3.1	7.1	7.3
15	15	9.0	8.0	6.2	6.8	3.5	16	3.0	2.3	3.1	13	7.2
16	14	8.6	7.8	6.6	6.8	4.5	6.2	3.1	2.2	3.1	31	6.9
17	14	8.6	7.6	9.4	6.8	5.0	5.9	2.9	2.3	3.1	7.2	6.9
18	15	9.0	7.6	7.6	6.8	4.0	12	2.8	2.2	3.0	7.6	7.3
19	16	9.4	7.8	7.6	7.2	3.5	19	9.4	2.3	2.9	7.1	7.3
20	16	9.2	7.8	7.8	7.0	4.0	23	17	2.2	3.2	6.9	7.2
21	15	9.2	7.6	8.0	7.0	3.5	13	18	2.1	2.9	7.1	8.5
22	15	8.2	7.6	7.6	6.8	3.5	3.3	12	2.5	2.9	8.2	10
23	15	8.8	7.6	7.8	7.0	3.0	3.6	13	3.2	3.0	8.1	8.6
24	16	8.6	7.8	7.4	7.4	2.5	3.3	5.8	2.7	3.0	7.9	7.2
25	16	8.2	7.2	7.2	8.4	3.0	3.0	3.2	2.7	3.0	8.0	6.7
26	16	8.0	7.0	7.0	10	3.5	2.0	3.1	2.8	3.2	8.1	6.0
27	15	8.4	8.0	8.2	9.8	4.0	2.5	3.0	2.9	3.3	8.0	5.5
28	14	8.2	7.4	7.2	9.8	4.5	1.9	2.9	2.9	3.4	7.0	5.4
29	14	7.8	7.2	7.4	---	4.0	2.5	2.9	3.0	3.5	7.1	5.5
30	16	7.6	8.4	8.2	---	3.5	3.1	2.7	3.6	3.9	7.4	5.7
31	16	---	8.6	7.6	---	3.3	---	2.8	---	3.5	7.1	---
TOTAL	403.4	325.4	237.8	230.0	208.0	131.5	341.1	509.4	82.8	105.6	224.5	216.3
MEAN	13.0	10.8	7.67	7.42	7.43	4.24	11.4	16.4	2.76	3.41	7.24	7.21
MAX	16	17	8.6	9.4	10	10	47	126	3.6	4.1	31	10
MIN	7.3	7.6	7.0	6.2	6.6	2.5	1.9	2.7	2.1	2.9	3.2	5.4
AC-FT	800	645	472	456	413	261	677	1010	164	209	445	429

CAL YR 1988 TOTAL 2972.6 MEAN 8.12 MAX 187 MIN 2.0 AC-FT 5900
WTR YR 1989 TOTAL 3015.8 MEAN 8.26 MAX 126 MIN 1.9 AC-FT 5980

09143000 SURFACE CREEK NEAR CEDAREDGE, CO

LOCATION.--Lat 38°59'05", long 107°51'13", in NW¼NW¼ sec.25, T.12 S., R.94 W., Delta County, Hydrologic Unit 14020005, on left bank 5 ft downstream from private bridge, 1.4 mi downstream from Caesar Creek, and 7.0 mi northeast of Cedaredge.

DRAINAGE AREA.--27.4 mi².

PERIOD OF RECORD.--July 1939 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WDR CO-83-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 8,261 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 15 to Mar. 21. Records fair except for estimated daily discharges, which are poor. Flow regulated by many small reservoirs. Some water imported from Leon Lake in Plateau Creek drainage. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--50 years, 43.2 ft³/s; 31,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 824 ft³/s, June 7, 1984, gage height, 3.67 ft, from rating curve extended above 310 ft³/s; maximum gage height, 5.10 ft, Apr. 13, 1958 (ice jam); minimum daily discharge, 0.80 ft³/s, Jan. 15, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 159 ft³/s at 1745 Apr. 20, gage height, 2.29 ft; minimum daily, 4.0 ft³/s, Oct. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	4.2	4.8	6.5	6.2	5.3	10	35	102	68	22	42
2	11	4.7	4.6	6.5	6.2	4.8	9.2	37	97	65	18	32
3	11	5.2	4.4	6.5	6.2	5.0	9.3	41	96	60	16	30
4	11	5.0	4.7	6.5	6.0	4.8	9.9	45	92	44	16	30
5	12	5.0	4.5	6.3	4.8	4.3	13	56	89	47	20	33
6	13	5.4	4.7	6.3	4.8	5.1	21	74	95	72	20	31
7	13	5.6	5.0	6.3	4.9	5.1	35	82	92	72	19	32
8	13	5.2	4.7	6.3	4.9	6.0	49	94	82	66	24	32
9	14	5.6	4.6	6.3	5.2	7.0	53	103	81	65	24	23
10	13	5.9	5.2	6.3	5.4	7.6	43	108	78	65	33	21
11	12	5.0	5.4	6.3	4.9	9.0	43	100	74	78	35	21
12	12	4.3	[illegible]	6.3	4.8	9.0	47	88	75	77	54	20
13	12	5.0	6.0	6.3	5.0	8.0	51	74	78	61	44	20
14	12	5.6	[illegible]	6.3	5.2	6.5	59	70	74	62	45	22
15	6.8	5.3	6.0	6.3	5.1	7.0	68	62	69	80	53	21
16	6.5	[illegible]	5.7	6.3	5.3	6.5	84	64	66	78	49	13
17	6.5	5.2	5.4	6.3	5.1	7.0	90	62	57	76	53	12
18	6.5	4.8	5.8	6.3	5.2	5.5	99	74	54	71	60	12
19	6.0	4.6	5.6	6.3	5.3	6.0	107	85	52	71	36	12
20	5.8	4.9	5.7	6.3	5.2	6.5	115	92	55	64	34	15
21	5.9	[illegible]	5.8	6.3	5.1	7.0	115	113	54	62	33	14
22	6.2	5.0	5.7	6.3	5.2	7.6	100	129	78	37	31	14
23	6.0	[illegible]	5.9	6.3	5.3	7.9	99	141	74	36	31	12
24	5.7	5.0	6.1	6.3	5.5	9.0	104	138	69	35	26	12
25	5.2	5.0	5.9	6.3	6.0	11	97	126	64	52	25	12
26	4.6	4.8	5.9	6.3	5.8	11	80	113	60	49	30	10
27	4.0	4.7	5.6	6.3	5.6	9.2	61	118	65	43	31	10
28	4.4	5.4	5.2	6.3	5.3	9.9	48	122	64	44	31	11
29	4.8	5.2	5.6	6.3	---	11	40	118	74	35	41	11
30	5.2	5.0	6.0	6.3	---	9.7	37	110	74	35	42	11
31	4.6	---	6.2	6.3	---	9.8	---	106	---	34	42	---
TOTAL	265.7	153.0	168.1	196.1	149.5	229.1	1796.4	2780	2234	1804	1038	591
MEAN	8.57	5.10	5.42	6.33	5.34	7.39	59.9	89.7	74.5	58.2	33.5	19.7
MAX	14	5.9	6.2	6.5	6.2	11	115	141	102	80	60	42
MIN	4.0	4.2	4.4	6.3	4.8	4.3	9.2	35	52	34	16	10
AC-FT	527	303	333	389	297	454	3560	5510	4430	3580	2060	1170

CAL YR 1988 TOTAL 12893.1 MEAN 35.2 MAX 159 MIN 4.0 AC-FT 25570
WTR YR 1989 TOTAL 11404.9 MEAN 31.2 MAX 141 MIN 4.0 AC-FT 22620

09143500 SURFACE CREEK AT CEDAREDGE, CO

LOCATION.--Lat 38°54'06", long 107°55'14", in SW¼SE¼ sec.20, T.13 S., R.94 W., Delta County, Hydrologic Unit 14020005, on left bank at Cedaredge, 700 ft east of State Highway 65, and 8.5 mi upstream from mouth.

DRAINAGE AREA.--39.0 mi^2.

PERIOD OF RECORD.--October 1916 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WDR CO-83-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 6,220 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 8, 1917, nonrecording gage at present site at datum 0.50 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 19-22, 27-29, Dec. 2-6, 8-14, 17-18, Dec. 27 to Jan. 5, 12-17, 23-28, 30, Feb. 5-10, and Mar. 5-6. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by diversions to and from nearby streams, many small storage reservoirs, diversions for irrigation, and return flow from irrigated areas. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--73 years, 28.2 ft^3/s; 20,430 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,190 ft^3/s, May 13, 1941, gage height, 2.50 ft, from rating curve extended above 640 ft^3/s; no flow, Sept. 25, 1939, and practically no flow at times during some winters.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 125 ft^3/s at 1900 Apr. 20, gage height, 1.87 ft; minimum daily, 0.85 ft^3/s, Oct. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	1.0	3.4	4.0	3.8	4.4	12	35	50	37	12	16
2	4.3	1.4	3.0	3.7	3.7	4.1	8.1	35	47	32	5.7	12
3	4.0	2.1	3.2	3.6	3.7	4.2	9.7	38	50	29	6.0	11
4	3.1	2.7	3.3	4.2	3.6	4.0	12	42	49	25	6.5	10
5	3.2	2.5	3.1	4.0	3.0	3.7	16	49	48	24	14	7.3
6	5.8	2.4	3.2	3.9	2.8	4.5	30	59	50	39	17	5.7
7	6.0	3.0	3.4	3.5	2.6	4.2	48	52	47	39	17	4.6
8	5.8	2.6	3.1	3.4	3.0	5.1	63	56	43	33	16	4.0
9	6.3	3.6	3.1	3.4	3.5	7.1	67	60	44	31	14	7.6
10	6.1	2.8	3.0	3.4	3.8	8.3	55	62	43	31	12	7.7
11	6.0	4.2	3.1	3.2	2.8	10	45	57	40	36	9.9	7.5
12	6.3	3.3	3.0	3.0	2.7	11	46	56	40	36	16	9.1
13	6.1	4.9	3.4	2.9	3.2	11	50	50	47	30	11	10
14	4.9	4.2	3.4	2.9	3.6	11	59	53	46	31	9.3	14
15	4.3	3.8	3.3	3.0	3.6	9.1	67	49	42	32	11	15
16	5.1	2.7	3.5	3.1	3.9	7.9	81	47	40	29	8.8	7.6
17	5.0	4.3	3.2	3.1	3.8	9.1	73	45	38	28	19	5.0
18	3.4	3.7	3.5	3.2	3.9	7.7	73	52	37	23	29	4.8
19	2.4	3.5	3.4	3.3	4.0	8.6	76	59	34	21	19	5.4
20	2.3	3.7	3.5	3.5	3.9	7.6	78	56	34	24	17	10
21	2.1	4.2	3.6	3.6	3.8	7.0	70	62	33	27	15	7.8
22	2.5	4.4	3.5	3.6	3.9	7.8	57	67	37	13	17	6.6
23	2.8	3.7	3.7	3.8	4.0	9.8	61	65	32	16	17	6.1
24	2.7	3.8	3.9	3.8	4.5	15	65	69	32	16	11	6.2
25	2.6	3.5	3.7	3.8	5.3	19	59	60	32	27	8.1	5.9
26	1.3	3.4	3.7	3.2	5.1	21	59	51	29	28	11	5.3
27	1.0	3.0	3.4	3.2	4.8	15	50	57	32	24	13	5.6
28	.85	3.8	3.0	3.7	4.5	15	46	57	30	25	13	5.2
29	1.6	3.4	3.4	3.5	---	17	41	54	33	21	18	1.5
30	1.9	3.7	3.8	3.5	---	9.6	38	57	35	18	19	2.5
31	1.5	---	4.0	3.7	---	9.0	---	57	---	17	16	---
TOTAL	114.55	99.3	104.8	107.7	104.8	287.8	1514.8	1668	1194	847	428.3	227.0
MEAN	3.70	3.31	3.38	3.47	3.74	9.28	50.5	53.8	39.8	27.3	13.8	7.57
MAX	6.3	4.9	4.0	4.2	5.3	21	81	69	50	39	29	16
MIN	.85	1.0	3.0	2.9	2.6	3.7	8.1	35	29	16	5.7	1.5
AC-FT	227	197	208	214	208	571	3000	3310	2370	1680	850	450

CAL YR 1988 TOTAL 6877.25 MEAN 18.8 MAX 91 MIN .85 AC-FT 13640
WTR YR 1989 TOTAL 6698.05 MEAN 18.4 MAX 81 MIN .85 AC-FT 13290

09144250 GUNNISON RIVER AT DELTA, CO

LOCATION.--Lat 38°45'01", long 108°04'06", in SE¼NE¼ sec.13, T.15 S., R.96 W., Delta County, Hydrologic Unit 14020005, on left bank near upstream side of U.S. Highway 50 bridge at north edge of Delta.

DRAINAGE AREA.--5,628 mi².

PERIOD OF RECORD.--May 1976 to current year. Gage-height records collected at this site [illegible]-77 (flood seasons only) are in reports of the National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 4,919.97 ft, National Weather Service Datum (levels by National Weather Service). Prior to May 1976 nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Jan. 12-25. Records good. Natural flow of stream affected by transmountain and transbasin diversions, storage reservoirs, power developments, and many diversions for irrigation. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--13 years, 2,357 ft³/s; 1,708,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,500 ft³/s, June 7, 1984, gage height, 13.15 ft; minimum daily, 208 ft³/s, Aug. 11, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum gage height observed, 13.5 ft, June [illegible], 19[illegible], from National Weather Service wire-weight gage at present datum, (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, [illegible] ft³/s at [illegible] July [illegible], gage height, [illegible] ft; minimum daily, 379 ft³/s, July 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	625	598	643	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	841	[illegible]	661	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	626	593	631	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5	593	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9	584	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	595	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20	[illegible]	674	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	660	624	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	607	598	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	585	595	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31	603	---	[illegible]	[illegible]	---	[illegible]	---	[illegible]	---	[illegible]	[illegible]	---
TOTAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MEAN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAX	841	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AC-FT	36920	37470	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CAL YR 1988 TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN [illegible] AC-FT [illegible]
WTR YR 1989 TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN 379 AC-FT [illegible]

09146200 UNCOMPAHGRE RIVER NEAR RIDGWAY, CO

LOCATION.--Lat 38°11'02", long 107°44'43", in SW¼NE¼ sec.4, T.45 N., R.8 W., Ouray County, Hydrologic Unit 14020006, on right bank 15 ft downstream from bridge, 0.2 mi downstream from Dry Creek, 0.5 mi upstream from Dallas Creek, and 2.3 mi north of Ridgway.

DRAINAGE AREA.--149 mi².

PERIOD OF RECORD.--October 1958 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,877.58 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.--Estimated daily discharges: Nov. 28-30, Dec. 9, 10, 22, 24, Dec. 27 to Jan. 4, Jan. 8-11, [illegible], 16-24, 27, Jan. 29 to Feb. 1, and Feb. 5-8. Records good except for estimated daily discharges, which are poor. Diversions for irrigation upstream from station. Water is imported upstream from station in some years by Red Mountain ditch from Mineral Creek in San Juan River basin. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--31 years, 166 ft³/s; 120,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,100 ft³/s, June 24, 1983, gage height, 5.73 ft; from rating curve extended above 1,800 ft³/s; minimum daily, 26 ft³/s, Jan. 13, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May [illegible]	[illegible]	*[illegible]	*[illegible]				

Minimum daily, 32 ft³/s, Feb. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	67	64	[illegible]	44	[illegible]	69	[illegible]	[illegible]	[illegible]	73	[illegible]	[illegible]
24	65	69	[illegible]	44	[illegible]	72	229	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	65	67	[illegible]	46	[illegible]	79	212	[illegible]	[illegible]	165	[illegible]	[illegible]
26	64	67	[illegible]	44	65	81	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	[illegible]	[illegible]	[illegible]	44	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	64	[illegible]	[illegible]	[illegible]	67	73	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31	66	---	[illegible]	[illegible]	---	[illegible]	---	[illegible]	---	[illegible]	[illegible]	---
TOTAL	[illegible]	1879	1738	[illegible]	1229	[illegible]	4111	7044	[illegible]	[illegible]	[illegible]	[illegible]
MEAN	[illegible]	[illegible]	[illegible]	40.8	[illegible]	[illegible]	137	227	[illegible]	[illegible]	[illegible]	[illegible]
MAX	[illegible]	77	64	51	68	124	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIN	[illegible]	54	[illegible]	38	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AC-FT	[illegible]	[illegible]	[illegible]	2610	[illegible]	4690	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CAL YR 1988 TOTAL 49915 MEAN 136 MAX 673 MIN [illegible] AC-FT [illegible]
WTR YR 1989 TOTAL 41227 MEAN 113 MAX 4[illegible]3 MIN 32 AC-FT 81770

09147000 DALLAS CREEK NEAR RIDGWAY, CO

LOCATION.--Lat 38°10'40", long 107°45'28", on line between sec.4 and 5, T.4 5 N., R.8 W., Ouray County, Hydrologic Unit 14020006, on right bank 25 ft downstream from county bridge, 1.5 mi upstream from mouth, and 1.5 mi northwest of Ridgway.

DRAINAGE AREA.--97.2 mi²

PERIOD OF RECORD.--March 1922 to October 1927, October 1955 to September 1971, October 1979 to current year.

REVISED RECORDS.--WSP 1924: 1960. WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 6,980 ft above National Geodetic Vertical Datum of 1929, from topographic map. Mar. 1, 1922 to Oct. 31, 1927, nonrecording gage at different datum.

REMARKS.--Estimated daily discharges: Nov. 19-23, Nov. 27 to Dec. 6, Dec. 8-14, 16-18, Dec. 21 to Jan. 19, Jan. 25 to Feb. 2, Feb. 5-19, and Mar. 5. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 4,500 acres upstream from and 700 acres downstream from station. One small ditch imports water from Leopard Creek (Dolores River basin) to drainage upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--31 years, 41.1 ft³/s; 29,780 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 1,120 ft³/s, Aug. 15, 1923, gage height, 4.40 ft, datum then in use, from rating curve extended above 160 ft³/s; maximum gage height, 6.13 ft, July 21, 1983; minimum daily discharge, 0.21 ft³/s, June 19, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 134 ft³/s at 1900 Mar. 8, gage height, 3.96 ft, maximum gage height, 5.28 ft, Jan. 1 (backwater from ice); minimum daily discharge, 1.2 ft³/s, May 17-21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	26	20	19	18	37	36	4.8	1.6	[illegible]	[illegible]	[illegible]
2	29	25	20	18	18	41	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	28	24	20	16	19	29	33	[illegible]	1.8	[illegible]	[illegible]	[illegible]
4	[illegible]	22	[illegible]	17	17	[illegible]	36	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5	28	22	20	19	16	34	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	31	22	20	[illegible]	15	41	41	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	32	22	21	19	14	57	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	[illegible]	22	20	18	13	63	49	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9	29	25	20	17	14	54	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	27	22	20	17	15	43	37	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11	27	24	19	17	15	45	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12	27	22	19	16	15	41	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13	27	23	19	16	15	41	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
14	27	24	18	16	16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15	27	27	17	16	16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	26	21	17	15	16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17	27	24	17	15	16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18	29	22	17	15	17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19	27	23	17	16	19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20	26	19	16	17	21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	27	20	17	17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
22	28	22	19	17	22	37	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	26	22	20	18	23	37	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	26	22	20	18	26	41	11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	25	21	19	18	24	43	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	25	20	19	18	49	46	7.9	1.4	1.8	29	[illegible]	[illegible]
27	24	21	19	18	45	42	[illegible]	1.4	[illegible]	[illegible]	[illegible]	[illegible]
28	24	20	19	18	38	38	5.5	1.5	[illegible]	[illegible]	[illegible]	[illegible]
29	25	19	19	18	---	43	5.1	1.5	[illegible]	[illegible]	[illegible]	[illegible]
30	30	18	19	18	---	34	5.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31	27	---	19	18	---	29	---	[illegible]	---	[illegible]	[illegible]	---
TOTAL	848	669	586	535	580	1172	694.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MEAN	27.4	22.3	18.9	17.3	20.7	37.8	23.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAX	32	27	21	20	49	63	49	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIN	24	18	16	15	13	24	5.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AC-FT	1680	1310	1160	1060	1150	2320	1380	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CAL YR 1988 TOTAL 10951.3 MEAN 29.9 MAX 255 MIN 1.1 AC-FT 21720
WTR YR 1989 TOTAL 6831.5 MEAN 18.7 MAX 63 MIN 1.2 AC-FT 13550

09147022 RIDGWAY RESERVOIR NEAR RIDGWAY, CO

LOCATION.--Lat 38°14'14", long 107°45'27", in NW¼ SW¼ sec.16, T.46N., R.8 W., Ouray County, Hydrologic Unit 14020006, in concrete gate house at base of Ridgway Reservoir on Uncompagre River, 0.5 mi upstream from Fisher Creek, and 5.3 mi north of Ridgway, CO.

DRAINAGE AREA.--265 mi².

PERIOD OF RECORD.--October 1988 to September 1989.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings published are to datum.

REMARKS.--Reservoir is formed by an earthfill dam. Dam completed March 22, 1988. Capacity 84,590 acre-ft between 6,680.0 ft, streambed at dam axis and 6,871.3 ft, maximum water surface. Dead storage below elevation 6,720.0 ft, 1,430 acre-ft. Figures given are live contents.

COOPERATION.--Capacity tables provided by U.S. Bureau of Reclamation.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 76,860 acre-ft, July 7, elevation, 6,865.22 ft; minimum contents, 61,050 acre-ft, Oct. 1, elevation, 6,848.5 ft.

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 2400 WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	*6,848.50	61,050	--
Oct. 31.	6,850.08	62,460	+1,410
Nov. 30.	6,849.92	62,320	-140
Dec. 31.	6,849.86	62,260	-60
CAL YR 1988	-	-	-
Jan. 31.	6,850.10	62,480	+220
Feb. 28.	6,850.62	62,940	+460
Mar. 31.	6,853.33	65,410	+2,470
Apr. 30.	6,854.88	66,850	+1,440
May 31.	6,859.21	70,950	+4,100
June 30.	6,865.11	76,750	+5,800
July 31.	6,864.73	76,370	-380
Aug. 31.	6,861.54	73,210	-3,160
Sept. 30.	6,861.48	73,140	-70
WTR YR 1989	-	-	+12,090

* Provided by USBR readings at 2400 hrs.

09147025 UNCOMPAHGRE RIVER BELOW RIDGWAY RESERVOIR, NEAR RIDGWAY, CO

LOCATION.--Lat 38°14'17", long 107°45'31", in NE¼SE¼ sec.17, T.46 N., R.8 W., Ouray County, Hydrologic Unit 14020006, on right bank 1,600 ft upstream from Fisher Creek, 800 ft downstream from Ridgway Reservoir gate house, and 5.4 mi north of Ridgway, CO.

DRAINAGE AREA.--265 mi².

PERIOD OF RECORD.--October 1988 to September 1989.

GAGE.--Water-stage recorder. Elevation of gage is 6,650 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 21. Records good. Diversions for irrigation by means of numerous canals downstream from station. Flow regulated by Ridgway Reservoir, capacity 84,591 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 515 ft³/s May 11, 1989, gage height, 2.84 ft; minimum daily, 40 ft³/s, January 12, 13, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 515 ft³/s at 1400 May 11, gage height, 2.84 ft; minimum daily, 40 ft³/s, January 12, 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	89	73	63	58	63	77	146	197	189	242	188
2	75	90	73	63	56	63	77	118	195	179	252	182
3	76	90	[illegible]	65	57	63	78	102	195	164	253	177
4	75	81	71	63	58	61	77	102	199	160	241	174
5	75	[illegible]	[illegible]	63	57	61	75	98	222	173	225	[illegible]
6	73	69	73	63	58	61	76	89	185	185	211	80
7	[illegible]	[illegible]	[illegible]	60	57	62	73	84	197	192	257	82
8	73	73	73	57	57	64	77	[illegible]	183	203	187	86
9	[illegible]	72	[illegible]	[illegible]	57	60	78	168	173	213	177	88
10	74	76	[illegible]	58	58	81	76	191	174	196	177	92
11	71	81	[illegible]	67	[illegible]	[illegible]	79	229	175	212	183	79
12	79	[illegible]	[illegible]	[illegible]	59	[illegible]	73	134	175	222	195	69
13	133	[illegible]	[illegible]	[illegible]	[illegible]	83	81	136	164	227	199	71
14	107	94	73	44	59	[illegible]	124	141	165	235	196	75
15	117	87	[illegible]	[illegible]	56	83	141	165	170	173	195	79
16	125	91	[illegible]	57	[illegible]	82	143	159	159	154	196	80
17	116	93	[illegible]	[illegible]	[illegible]	82	148	157	133	135	199	83
18	112	84	[illegible]	57	57	[illegible]	141	117	136	134	199	85
19	113	75	72	47	[illegible]	[illegible]	143	116	178	134	234	85
20	104	73	[illegible]	56	61	77	193	153	292	135	199	87
21	104	73	71	57	62	75	215	151	264	135	186	85
22	93	75	[illegible]	57	[illegible]	[illegible]	215	171	245	134	163	87
23	87	71	76	[illegible]	[illegible]	[illegible]	211	167	[illegible]	128	140	96
24	87	73	75	57	63	[illegible]	221	175	233	135	132	101
25	85	71	[illegible]	58	[illegible]	[illegible]	227	187	241	137	144	89
26	76	83	74	57	61	76	222	194	231	219	148	64
27	71	85	71	57	62	77	137	199	226	257	145	90
28	71	85	71	57	63	77	151	193	216	260	144	94
29	71	79	71	57	---	77	143	195	207	255	156	95
30	71	71	64	56	---	77	144	195	195	259	162	95
31	81	---	63	57	---	77	---	193	---	256	179	---
TOTAL	2674	2457	2241	1754	1651	2334	3989	4922	5947	5763	5837	2956
MEAN	86.3	81.9	72.3	56.6	59.0	75.3	133	159	198	186	188	98.5
MAX	125	95	[illegible]	65	63	83	227	229	292	260	253	188
MIN	71	64	61	40	56	61	75	84	133	134	132	69
AC-FT	5300	4870	4450	3480	3280	4630	7910	9760	11800	11430	11580	5860

WTR YR 1989 TOTAL 42536 MEAN 117 MAX 292 MIN 40 AC-FT 84370

09147500 UNCOMPAHGRE RIVER AT COLONA, CO

LOCATION.--Lat 38°19'53", long 107°46'44", in NW¼NW¼ sec.17, T.47 N., R.8 W., Ouray County, Hydrologic Unit 14020006, on right bank 75 ft downstream from county highway crossing, 0.2 mi north of Colona, and 1.0 mi upstream from Beaton Creek.

DRAINAGE AREA.--448 mi².

PERIOD OF RECORD.--April 1903 to November 1905, April to June 1906 (gage heights and discharge measurements only), October 1912 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "near Colona" 1904-6, 1922-39.

REVISED RECORDS.--WSP 1313: 1904. WDR CO-83-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,318.8[illegible] ft above National Geodetic Vertical Datum of 1929. See WSP 1713 or 1733 for history of changes prior to Sept. 30, 1949.

REMARKS.--Estimated daily discharges: Dec. 28 to Jan. 3, Jan. 11-19, and Feb. 6-13. Records good. Flow regulated by Ridgway Reservoir, 7.7 mi upstream since 1986, total capacity, 84,590 acre-ft. Diversions upstream from station for irrigation of about [illegible] acres downstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--[illegible] years (water years [illegible], [illegible]), [illegible] ft³/s; [illegible] acre-ft/yr, prior to completion of Ridgway Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, [illegible] ft³/s, June [illegible], 1921; minimum daily, [illegible] ft³/s, Sept. [illegible], 19[illegible], May 7, 19[illegible].

EXTREMES FOR CURRENT YEAR.--Maximum discharge, [illegible] ft³/s at [illegible] May [illegible], gage height, [illegible] ft; minimum daily, [illegible] ft³/s, Sept. [illegible].

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER [illegible] TO SEPTEMBER [illegible]
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31	[illegible]	---	[illegible]	[illegible]	---	[illegible]	---	[illegible]	---	[illegible]	[illegible]	---
TOTAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MEAN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAX	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AC-FT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CAL YR [illegible] TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN [illegible] AC-FT [illegible]
WTR YR [illegible] TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN [illegible] AC-FT [illegible]

09149500 UNCOMPAHGRE RIVER AT DELTA, CO

LOCATION.--Lat 38°44'31", long 108°04'49", in SW¼SW¼ sec.13, T.15 S., R.96 W., Delta County, Hydrologic Unit 14020006, on right bank 525 ft downstream from 5th Street Bridge at west edge of Delta and 1.1 mi upstream from mouth.

DRAINAGE AREA.--1,115 mi².

PERIOD OF RECORD.--April 1903 to October 1931 (no winter records in most years), September 1938 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "near Delta" 1907-24.

REVISED RECORDS.--WSP 1243: 1904. WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,926.49 ft above National Geodetic Vertical Datum of 1929. Feb. 18, 1960, to Mar. 26, 1963, water-stage recorder at site 750 ft upstream at datum 3.43 ft, higher. Mar. 27, 1963, to May 12, 1965, water-stage recorder at site 1,050 ft upstream at datum 6.08 ft, higher. See WSP 1733 or 1924 for history of changes prior to Feb. 18, 1960.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by water diverted from Gunnison River (see record of diversion through Gunnison tunnel published with station 09128000) and other adjacent basins, diversions for irrigation of about 90,000 acres above station, and return flow from irrigated areas. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--53 years (water years 1908, 1921, 1939-89), 295 ft³/s; 213,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 5,800 ft³/s, May 15, 1984, gage height, 8.85 ft, from rating curve extended above 3,400 ft³/s; no flow at times in 1908; minimum daily determined since beginning of diversion through Gunnison tunnel, 7.0 ft³/s, July 10-15, 17, 21, 24-28, 1910.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 976 ft³/s at 2300 Aug. 11, gage height, 4.31 ft; minimum daily, 65 ft³/s, May 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	238	266	145	107	109	136	261	102	136	117	207	187
2	191	164	142	106	119	132	252	85	154	133	207	194
3	188	144	136	109	118	131	214	68	160	133	204	206
4	177	128	121	95	144	125	189	65	162	130	192	234
5	175	123	127	112	118	109	151	74	155	130	194	247
6	239	124	131	103	87	115	187	75	143	121	171	223
7	327	122	148	102	86	114	263	72	144	109	164	227
8	274	131	141	95	92	121	261	85	164	108	162	223
9	346	133	142	105	117	145	264	93	180	107	169	241
10	331	132	126	94	128	137	261	100	178	114	175	237
11	329	133	139	98	123	213	176	119	187	156	243	236
12	342	152	140	87	116	197	157	159	196	155	334	263
13	352	135	141	89	123	182	132	138	211	162	229	366
14	412	132	140	94	114	200	160	146	196	156	198	364
15	343	167	138	99	106	176	165	166	172	157	193	400
16	306	182	136	94	106	158	159	159	170	151	196	405
17	313	175	125	92	110	147	172	164	171	143	193	410
18	298	184	124	96	115	150	167	145	153	132	334	407
19	267	164	133	106	121	139	162	138	131	116	341	317
20	256	150	137	120	159	154	184	143	124	101	297	326
21	276	144	128	123	155	146	192	167	174	96	387	326
22	339	148	119	127	123	136	179	168	173	103	329	371
23	281	137	122	133	121	113	168	146	169	163	261	370
24	293	137	109	140	130	168	154	150	160	141	214	369
25	331	143	123	133	160	207	130	141	164	171	201	360
26	397	142	132	104	178	196	107	128	158	185	192	312
27	363	135	112	98	184	166	108	122	146	217	187	261
28	273	131	96	112	152	134	107	142	130	186	192	254
29	245	146	111	113	---	195	107	159	115	203	187	245
30	251	152	118	104	---	402	99	155	115	452	193	237
31	243	---	116	105	---	334	---	146	---	280	189	---
TOTAL	8996	4456	4003	3301	3531	5229	5288	3916	4791	4828	6935	8818
MEAN	290	149	129	106	126	169	176	126	160	156	224	294
MAX	412	266	148	140	184	402	264	168	211	452	387	410
MIN	175	122	96	87	86	109	99	65	115	96	162	187
AC-FT	17840	8840	7940	6550	7000	10370	10490	7770	9500	9580	13760	17490

CAL YR 1988 TOTAL 68446 MEAN 187 MAX 1090 MIN 67 AC-FT 135800
WTR YR 1989 TOTAL 64051 MEAN 175 MAX 452 MIN 65 AC-FT 127000

09151500 ESCALANTE CREEK NEAR DELTA, CO

LOCATION.--Lat 38°45'24", long 108°15'34", in E½ sec.8, T.15 S., R.97 W., Sixth Principal Meridian, Delta County, Hydrologic Unit 14020005, on left bank just upstream from county bridge, 0.2 mi upstream from mouth, and 10.5 mi west of Delta.

DRAINAGE AREA.--209 mi².

PERIOD OF RECORD.--April 1922 to September 1923, May 1976 to September 1989 (discontinued).

REVISED RECORDS.--WSP 1313: 1923 (monthly runoff). WDR CO-84-2: 1979.

GAGE.--Water-stage recorder. Elevation of gage is 4,810 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to September 1923, nonrecording gage at different datum operated by State Engineer of Colorado.

REMARKS.--Estimated daily discharges: Nov. 28 to Feb. 18. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--13 years, 60.4 ft³/s; 43,760 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,050 ft³/s, July 24, 1977, gage height, 8.54 ft, from floodmarks, from rating curve extended above 320 ft³/s, on basis of slope-area measurement of peak flow; no flow, June 23-25, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 300 ft³/s at 0400 April 9, gage height, 3.58 ft; minimum daily, 0.81 ft³/s, July 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	10	9.0	9.3	12	23	82	72	12	1.9	5.2	2.5
2	9.5	11	9.4	9.6	13	25	74	73	12	1.7	5.6	2.9
3	9.0	11	9.8	10	13	32	79	75	12	1.7	5.9	3.3
4	8.0	10	10	11	12	23	87	76	11	1.6	4.9	2.9
5	8.8	10	11	12	10	20	82	77	11	1.6	3.9	3.4
6	9.0	[illegible]	11	11	8.7	24	99	73	11	1.4	3.2	3.3
7	9.9	9.7	9.6	11	9.0	24	178	73	10	1.0	1.9	3.2
8	9.9	10	9.5	11	10	27	226	73	9.7	.81	2.2	3.7
9	10	11	9.4	12	11	30	231	70	8.1	1.3	2.5	2.8
10	10	11	9.3	12	12	31	217	67	6.5	1.4	2.3	3.6
11	9.9	12	9.4	11	16	34	177	63	6.5	3.5	2.6	4.5
12	9.4	12	9.6	11	16	35	174	59	6.5	5.0	4.4	5.2
13	10	12	9.6	[illegible]	15	36	162	48	9.6	5.7	5.9	4.2
14	10	11	9.5	12	15	37	166	44	7.8	6.2	5.6	4.2
15	10	15	9.2	11	14	34	175	41	6.5	5.1	5.0	4.6
16	10	12	[illegible]	[illegible]	14	36	[illegible]	39	5.2	4.0	6.5	4.6
17	11	12	9.5	[illegible]	15	38	[illegible]	38	4.0	3.5	6.6	5.0
18	11	11	9.8	11	[illegible]	36	[illegible]	36	3.8	3.1	7.0	5.4
19	10	11	10	12	21	33	[illegible]	29	3.5	2.7	7.1	5.3
20	10	11	9.5	11	[illegible]	42	239	23	3.5	2.7	6.7	4.6
21	10	12	9.2	[illegible]	19	37	215	26	3.1	2.6	6.7	4.5
22	10	12	9.1	12	[illegible]	39	202	26	2.9	1.8	6.7	4.2
23	11	12	9.4	11	21	43	185	25	3.5	6.9	6.7	4.3
24	11	13	10	11	22	54	161	21	2.9	5.8	6.2	4.4
25	10	12	11	11	25	67	139	13	2.8	6.1	5.5	4.7
26	11	12	10	10	27	79	116	17	2.8	6.1	4.8	4.6
27	11	[illegible]	9.6	10	27	73	103	17	2.6	8.2	3.4	4.6
28	11	9.6	9.8	11	24	64	94	16	2.5	7.3	3.5	4.6
29	11	9.4	9.0	12	---	76	87	15	2.6	6.4	2.8	4.6
30	10	9.2	9.6	12	---	70	80	13	2.6	6.3	2.9	4.8
31	11	---	10	12	---	57	---	13	---	5.9	3.1	---
TOTAL	311.6	[illegible]	295.9	341.4	460.0	1289	4604	1357	133.5	119.31	147.3	124.5
MEAN	10.1	11.1	[illegible]	11.0	16.4	41.6	153	43.8	6.28	3.85	4.75	4.15
MAX	11	15	11	12	27	79	231	77	12	8.2	7.1	5.4
MIN	[illegible]	9.2	8.4	[illegible]	[illegible]	20	74	13	2.5	.81	1.9	2.5
AC-FT	618	[illegible]	[illegible]	677	912	2560	9130	2690	274	237	292	247

CAL YR 1988 TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN .45 AC-FT 27290
WTR YR 1989 TOTAL [illegible] MEAN 26.2 MAX 231 MIN .81 AC-FT 18980

09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO

LOCATION.--Lat 38°59'00", long 108°27'00", in NE¼SW¼ of sec.14, T.2 S., R .1 E., Ute Meridian, Mesa County, Hydrologic Unit 14020005, on right bank 180 ft upstream from bridge on State Highway 141, 0.4 mi downstream from Whitewater Creek, 0.5 mi south of Whitewater, and 8 mi southeast of Grand Junction.

DRAINAGE AREA.--7,928 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1894 to December 1895 (gage heights only), October 1896 to September 1899, October 1901 to October 1906, October 1916 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "at Whitewater" 1901-6.

REVISED RECORDS.--WSP 509: Drainage area at former site. WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,628.12 ft above National Geodetic Vertical Datum of 1929. See WSP 1733 or 1924 for history of changes prior to October 1959.

REMARKS.--Estimated daily discharges: Jan. 6-8, 20-26. Records good. Records show flow that enters Colorado River from Gunnison River basin except for about 60 ft³/s diverted downstream from gage during irrigation season. Natural flow of river affected by diversions for irrigation of about 233,000 acres upstream from station, storage reservoirs, and return flow from irrigated lands.

AVERAGE DISCHARGE.--81 years (water years 1897-99, 1902-06, 1917-89), 2,604 ft³/s; 1,887,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 35,700 ft³/s, May 23, 1920, gage height, 14.95 ft, site and datum then in use, from rating curve extended above 22,000 ft³/s; minimum daily, 106 ft³/s, July 20, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,960 ft³/s at 1430 Apr. 22, gage height, 5.29 ft; minimum daily, 610 ft³/s, Dec. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1450	976	906	827	924	915	1540	1450	1930	715	1180	857
2	1440	932	992	871	942	895	1660	1310	1810	729	1050	874
3	1400	837	1010	867	980	957	1610	1200	1770	737	1030	948
4	1240	850	1070	919	993	1050	1640	1180	1730	717	999	1000
5	998	836	1060	852	915	922	1930	1150	1630	692	936	1070
6	969	840	896	900	675	845	2040	1140	1590	678	883	1090
7	1160	830	967	861	693	982	2300	1270	1610	631	830	1040
8	1190	856	895	850	742	927	2450	1630	1540	627	785	1010
9	1150	838	813	817	872	1010	2750	1980	1600	649	746	1060
10	1140	943	772	883	1110	1180	2860	2310	1590	684	753	1140
11	1140	943	804	919	1090	1330	2790	2540	1580	727	849	1180
12	1150	1050	874	872	1100	1390	2650	2420	1580	787	1070	1220
13	1160	1030	886	761	1120	1380	2520	2200	1670	783	1080	1300
14	1210	982	889	689	1080	1320	2300	1870	1740	806	1070	1390
15	1230	1030	873	847	1040	1240	2390	1800	1500	819	989	1420
16	1130	1130	843	947	1010	1350	2480	1670	1390	788	1010	1420
17	1150	1030	800	851	1000	2270	2730	1670	1430	734	980	1420
18	1150	1010	809	806	1010	1570	2870	1740	1420	686	996	1400
19	1130	996	888	845	973	1080	3110	1730	1360	694	1490	1350
20	1080	946	922	900	1110	1090	3230	1950	1300	673	1210	1300
21	1070	929	881	900	1220	1190	3440	2240	1220	663	1260	1340
22	1110	923	813	920	1060	1330	3620	2420	1350	681	1250	1350
23	1120	942	796	920	1010	1460	3500	2390	1190	736	1160	1360
24	1080	956	796	910	989	1620	3430	2410	1070	830	1040	1350
25	1080	956	856	900	939	1390	3310	2540	967	962	967	1300
26	1110	977	909	900	1010	1940	3010	2210	948	986	965	1270
27	1200	962	790	883	1060	2020	2720	1870	914	1070	928	1240
28	1130	927	675	886	1020	1910	2120	1880	796	1040	959	1190
29	955	914	610	889	---	1690	1730	2050	777	1050	938	1160
30	948	942	700	897	---	1830	1620	2140	749	1740	891	1140
31	949	---	672	890	---	1680	---	2090	---	1420	870	---
TOTAL	35419	28312	26467	26979	27692	42043	76260	58220	41751	25534	31154	36199
MEAN	1143	944	854	870	989	1356	2542	1878	1392	824	1005	1207
MAX	1450	1130	1070	947	1220	2270	3620	2540	1930	1740	1490	1420
MIN	948	830	610	689	675	845	1540	1140	749	627	746	857
AC-FT	70250	56160	52500	53510	54930	83390	151300	115500	82810	50650	61790	71800

CAL YR 1988 TOTAL 587980 MEAN 1607 MAX 3510 MIN 610 AC-FT 1166000
WTR YR 1989 TOTAL 456030 MEAN 1249 MAX 3620 MIN 610 AC-FT 904500

09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO--Continued
(Irrigation network station)
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1931 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1935 to September 1974, September 1975 to current year.
WATER TEMPERATURES: April 1949 to September 1974, September 1975 to current year.

INSTRUMENTATION.--Water-quality monitor since September 1975

REMARKS.--Daily maximum and minimum specific-conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 3,000 microsiemens several days during July and September 1974; minimum, 194 microsiemens June 6, 1979.
WATER TEMPERATURE: Maximum, 30.0°C Aug. 13, 1958; minimum, 0.0°C on many days during winter months most years.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 1,570 microsiemens July 31 ; minimum recorded, 440 microsiemens April 23-28.
WATER TEMPERATURES: Maximum, 22.4°C Aug. 31 (may have been exceeded during period of missing record June 15 to Aug.30); minimum, 0.5°C Dec. 1 (may have been lower during period of missing record Dec. 7 to March 14).

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
NOV												
02...	1320	924	1400	8.3	8.5	7.6	10.4	K41	K56	600	150	55
FEB												
02...	1500	932	1290	8.1	0.0	9.8	11.8	K7	250	470	110	47
APR												
12...	1110	2550	510	8.3	10.0	130	8.4	190	250	190	50	16
JUN												
14...	1105	1720	1020	8.2	18.0	41	7.9	190	K92	410	110	34
JUL												
18...	1200	653	1400	8.3	21.0	30	8.0	K18	K53	610	160	50
AUG												
29...	1205	941	1370	8.2	17.0	36	9.0	70	71	600	160	48

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV												
02 ..	91	2	4.3	207	0	170	560	11	0.50	13	1040	1000
FEB												
02...	85	2	4.1	206	0	169	480	12	0.30	14	883	865
APR												
12...	27	0.9	2.4	132	0	108	140	5.1	0.20	11	316	315
JUN												
14...	54	1	3.5	176	0	144	390	8.4	0.40	12	738	703
JUL												
18...	90	2	4.7	185	10	168	610	12	0.50	14	1090	1060
AUG												
29...	84	2	4.0	210	0	172	590	8.6	0.60	11	1040	1020

K Based on non-ideal colony count

09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHOROUS TOTAL (MG/L AS P)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P)
NOV												
02...	1.41	2590	--	<0.010	1.40	0.030	0.030	0.27	0.30	0.010	0.010	<0.010
FEB												
02...	1.20	2220	1.58	0.020	1.60	0.060	0.090	0.54	0.60	0.050	0.020	0.010
APR												
12...	0.43	2180	--	<0.010	0.420	0.070	0.050	0.83	0.90	0.190	0.010	0.020
JUN												
14...	1.00	3430	1.18	0.020	1.20	0.050	0.050	0.25	0.30	0.060	0.040	0.020
JUL												
13...	1.48	1910	2.07	0.030	2.10	0.080	0.080	0.42	0.50	0.040	0.030	0.010
AUG												
29...	1.41	2640	--	<0.010	1.80	0.040	0.040	0.46	0.50	0.080	<0.010	<0.010

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV											
02...	1320	<10	2	49	<0.5	<1	<1	<3	4	10	<5
APR											
12...	1110	40	1	65	<0.5	<1	<1	<3	3	42	<5
JUL											
18...	1200	<10	2	56	<0.5	<1	<1	<3	2	5	<1
AUG											
29...	1205	<10	1	57	<0.5	1	1	<3	2	8	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV										
02...	91	30	<0.1	<10	5	11	1.0	1600	<6	9
APR										
12...	22	14	<0.1	<10	<1	2	<1.0	490	<6	6
JUL										
18...	95	24	<0.1	<10	1	11	<1.0	1800	<6	21
AUG										
29...	87	12	0.1	<10	1	10	<1.0	1800	<6	14

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
02...	1320	924	63	157	50
FEB					
02...	1500	932	77	194	--
APR					
12...	1110	2550	366	2520	92
JUN					
14...	1105	1720	130	604	93
JUL					
18...	1200	650	67	118	96
AUG					
29...	1205	941	139	353	90

09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO--Continued

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1090	1340	1350	1400	---	---	752	538	771	---	1440	1330
2	1110	1310	1330	1360	---	---	776	---	792	---	1390	1330
3	1080	1280	1250	1320	---	---	785	---	818	---	1410	1330
4	1070	1360	1240	1300	---	---	788	---	848	---	1420	1310
5	1140	1360	1190	1270	---	---	780	---	869	---	1430	1300
6	1290	1350	1180	1250	---	---	707	---	892	---	1450	1310
7	1320	1350	1170	1230	---	---	657	---	921	1350	1470	1300
8	1260	1360	1140	1290	---	---	635	817	940	1380	1460	1310
9	1240	1350	1200	---	---	---	611	722	962	1360	1420	1310
10	1240	1380	1260	---	---	---	582	631	976	1370	1450	1310
11	1240	1400	1300	---	---	---	543	587	990	1370	1480	1300
12	1230	1390	1290	---	---	---	526	584	995	1400	1410	1290
13	1240	1460	1230	---	---	---	510	593	1010	1430	1380	1280
14	1240	1450	1200	---	---	---	516	611	1020	1440	1360	1270
15	1230	1390	1230	---	---	934	525	648	1000	1420	1340	1270
16	1230	1380	1280	---	---	943	541	662	---	1430	1310	1250
17	1250	1400	1320	---	---	806	535	712	---	1430	1310	1240
18	1260	1380	1320	---	---	611	523	787	---	1430	1310	1240
19	1270	1380	1280	---	---	621	513	804	---	1420	1310	1220
20	1300	1370	1260	---	---	720	496	804	---	1420	1270	1210
21	1310	1360	1260	---	---	756	479	770	---	1420	1310	1240
22	1300	1360	1280	---	---	846	465	723	---	1420	1310	1260
23	1300	1350	1310	---	---	865	450	700	---	1420	1290	1270
24	1310	1350	1350	---	---	834	445	675	---	1390	1270	1250
25	1320	1340	1320	---	---	810	446	665	---	1410	1270	1240
26	1320	1330	1250	---	---	793	444	664	---	1490	1290	---
27	1310	1340	1270	---	---	772	446	667	---	1490	1290	---
28	1270	1360	1320	---	---	736	454	702	---	1420	1320	---
29	1280	1360	1330	---	---	732	491	751	---	1360	1280	1210
30	1320	1350	1370	---	---	735	524	762	---	1380	1280	1200
31	1330	---	1370	---	---	737	---	763	---	1510	1330	---
MEAN	1250	1360	1270	---	---	---	565	---	---	---	1360	---

09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.9	10.8	11.4	10.3	2.6	.5	---	---	---	---	---	---
2	16.1	11.6	10.5	8.8	3.0	.7	---	---	---	---	---	---
3	15.3	12.5	11.9	9.9	3.4	1.1	---	---	---	---	---	---
4	14.8	12.7	11.9	9.9	3.5	1.6	---	---	---	---	---	---
5	14.8	12.2	10.8	8.4	3.7	1.6	---	---	---	---	---	---
6	13.3	12.5	9.3	8.0	3.1	1.4	---	---	---	---	---	---
7	14.9	12.6	9.5	7.1	---	---	---	---	---	---	---	---
8	15.1	12.3	9.8	8.2	---	---	---	---	---	---	---	---
9	14.4	12.6	10.9	9.0	---	---	---	---	---	---	---	---
10	14.6	11.7	9.8	8.4	---	---	---	---	---	---	---	---
11	14.4	11.5	9.6	8.6	---	---	---	---	---	---	--	---
12	13.8	11.9	8.7	7.4	---	---	---	---	---	---	---	---
13	14.4	12.3	9.2	7.2	---	---	---	---	---	---	---	---
14	15.0	12.9	10.3	8.9	---	---	---	---	---	---	---	---
15	15.6	12.8	9.5	7.5	---	---	---	---	---	---	7.7	5.3
16	15.6	13.1	7.3	5.7	---	---	---	---	---	---	9.3	5.8
17	15.3	12.9	6.5	5.4	---	---	---	---	---	---	8.7	6.7
18	15.4	12.9	6.8	5.4	---	---	---	---	---	---	7.9	5.3
19	15.0	12.7	5.6	3.7	---	---	---	---	---	---	8.1	6.7
20	14.8	12.3	5.2	3.4	---	---	---	---	---	---	8.3	6.7
21	14.1	11.8	4.7	2.7	---	---	---	---	---	---	9.0	5.5
22	13.4	11.3	4.1	2.7	---	---	---	---	---	---	10.3	7.6
23	13.3	10.8	5.3	3.0	---	---	---	---	---	---	12.2	8.8
24	13.0	10.7	5.8	5.1	---	---	---	---	---	---	13.3	10.2
25	12.4	10.7	5.9	4.9	---	---	---	---	---	---	12.4	10.0
26	12.0	9.8	5.6	4.6	---	---	---	---	---	---	11.0	9.5
27	11.9	9.7	4.8	2.9	---	---	---	---	---	---	11.0	8.8
28	11.5	9.8	2.8	1.5	---	---	---	---	---	---	11.9	8.1
29	11.8	10.0	2.6	.7	---	---	---	---	---	---	11.1	9.4
30	12.7	10.3	2.4	.7	---	---	---	---	---	---	10.4	7.8
31	12.9	10.7	---	---	---	---	---	---	---	---	10.5	6.8
MONTH	16.1	9.7	11.9	.7	---	---	---	---	---	---	---	---

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.4	8.3	---	---	19.2	14.7	---	---	---	---	21.8	18.0
2	10.3	7.9	---	---	19.5	15.6	---	---	---	---	21.4	17.9
3	10.3	7.9	---	---	17.4	16.0	---	---	---	---	20.8	18.1
4	11.5	8.1	---	---	18.6	14.6	---	---	---	---	20.0	17.3
5	12.0	8.3	---	---	19.8	15.5	---	---	---	---	19.7	17.0
6	13.2	9.2	---	---	19.4	16.8	---	---	---	---	20.0	16.9
7	14.1	10.7	---	---	20.5	15.9	---	---	---	---	21.2	18.0
8	14.6	11.5	20.6	16.4	19.9	17.9	---	---	---	---	20.0	17.8
9	13.4	10.9	19.5	16.5	21.2	17.4	---	---	---	---	19.0	15.5
10	10.9	9.2	18.2	16.1	19.9	17.8	---	---	---	---	18.1	15.9
11	11.6	9.1	16.6	14.7	20.8	16.8	---	---	---	---	17.3	15.2
12	12.1	9.8	14.4	12.6	20.4	18.0	---	---	---	---	16.1	14.4
13	12.4	9.8	15.1	11.6	21.1	17.1	---	---	---	---	17.2	13.9
14	12.7	9.8	14.7	12.7	22.2	18.0	---	---	---	---	17.5	13.7
15	13.2	10.3	15.0	12.9	---	---	---	---	---	---	17.5	13.9
16	13.9	11.2	14.1	12.9	---	---	---	---	---	---	16.9	14.0
17	14.5	12.7	16.8	12.2	---	---	---	---	---	---	17.9	14.6
18	14.6	12.1	18.1	13.0	---	---	---	---	---	---	19.0	16.1
19	13.8	12.5	19.2	15.1	---	---	---	---	---	---	18.4	15.8
20	14.5	12.4	19.3	14.9	---	---	---	---	---	---	18.2	16.1
21	13.4	12.6	19.2	16.1	---	---	---	---	---	---	18.0	15.4
22	13.9	12.0	19.1	16.0	---	---	---	---	---	---	17.6	14.4
23	13.0	10.9	18.5	16.1	---	---	---	---	---	---	17.9	14.7
24	13.6	11.9	17.5	15.5	---	---	---	---	---	---	18.6	15.2
25	13.7	11.8	16.5	14.2	---	---	---	---	---	---	18.5	15.3
26	13.9	12.0	17.1	13.4	---	---	---	---	---	---	---	---
27	12.2	9.9	18.7	14.4	---	---	---	---	---	---	---	---
28	---	---	19.6	15.6	---	---	---	---	---	---	---	---
29	---	---	19.5	16.0	---	---	---	---	---	---	18.7	15.9
30	---	---	18.6	16.0	---	---	---	---	---	---	18.0	15.4
31	---	---	18.3	14.9	---	---	---	---	22.4	18.5	---	---

09153290 REED WASH NEAR MACK, CO

LOCATION.--Lat 39°12'41", long 108°48'11", in SE¼SW¼ sec.27, T.2 N., R.3 W., Ute Meridian, Mesa County, Hydrologic Unit 14010005, on right bank 250 ft upstream from unnamed tributary, 0.4 mi downstream from Peck and Beede Wash, and 3.5 mi east of Mack.

DRAINAGE AREA.--15.7 mi².

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,505 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Jan. 12, 13, Feb. 3-10, Feb. 25 to Mar. 16, May 3-7, and Aug. 1-14. Records good except for estimated daily discharges, which are poor. Flow is mostly return flow and waste water from irrigated lands under Government Highline and Grand Valley Canals. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--14 years, 47.5 ft³/s; 34,410 acre-ft/yr. The figures published in the 1987, and 1988 reports are in error; the correct figures are: 12 years, 48.4 ft³/s; 35,070 acre-ft/yr, and 13 years, 48.0 ft³/s; 34,780 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 390 ft³/s, July 23, 1983, gage height, unknown, maximum recorded gage height, 6.09 ft, July 24, 1979; minimum daily discharge, 2.0 ft³/s, Jan. 31, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 115 ft³/s at 1100 Aug. 31, gage height, 4.23 ft; minimum daily, 3.1 ft³/s, Mar. 21, 25, 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	87	5.9	8.2	4.1	4.2	3.3	53	67	72	87	86
2	66	81	5.7	7.7	4.2	4.1	3.3	54	68	76	84	88
3	59	82	5.6	7.5	4.1	4.0	3.3	52	71	74	79	82
4	59	85	5.6	7.4	4.0	4.0	3.2	53	63	61	74	73
5	58	35	5.6	7.2	3.9	3.9	3.4	53	56	56	78	63
6	67	18	24	7.2	3.7	3.9	3.4	54	57	57	80	58
7	67	14	88	7.0	3.6	3.9	38	55	54	53	77	60
8	70	11	67	6.6	3.5	3.8	79	57	48	59	70	70
9	79	11	72	6.2	3.7	3.8	60	50	51	65	63	68
10	84	9.8	68	6.2	3.8	3.7	66	54	50	60	66	76
11	78	10	70	6.1	3.9	3.7	68	54	52	59	72	54
12	84	9.5	75	6.0	3.8	3.6	72	62	54	58	70	30
13	86	9.4	76	5.8	3.6	3.6	76	55	55	70	64	28
14	85	9.4	76	5.6	3.6	3.5	87	52	57	77	60	28
15	89	9.1	78	5.1	3.6	3.4	81	58	62	75	57	31
16	89	8.5	32	5.1	3.7	3.3	75	55	64	67	52	32
17	85	8.5	11	4.8	3.8	3.2	65	51	59	69	60	35
18	86	8.1	11	4.7	3.9	3.3	54	48	55	66	61	46
19	86	8.0	11	4.5	3.9	3.3	48	45	56	72	60	66
20	79	7.7	10	4.4	4.3	3.2	45	43	56	71	64	70
21	78	7.5	10	4.3	3.9	3.1	45	43	55	64	62	77
22	84	7.2	10	4.5	3.8	3.2	45	45	59	74	63	82
23	79	7.1	10	4.3	3.5	3.2	41	53	63	80	61	76
24	78	7.0	9.9	4.3	4.4	3.2	35	61	62	75	63	72
25	80	7.0	9.8	4.2	4.2	3.1	44	68	65	70	71	72
26	85	6.6	9.8	4.0	4.2	3.3	52	62	60	82	77	64
27	81	6.4	9.2	4.1	4.3	3.2	54	62	52	79	72	61
28	83	6.3	8.9	4.2	4.3	3.1	62	60	59	83	78	57
29	88	6.1	8.6	4.0	---	3.2	65	65	62	80	66	61
30	91	5.9	8.5	3.9	---	3.2	61	70	75	88	71	67
31	91	---	8.3	3.9	---	3.2	---	68	---	90	86	---
TOTAL	2446	589.1	900.4	169.0	109.3	108.4	1437.9	1715	1767	2182	2148	1833
MEAN	78.9	19.6	29.0	5.45	3.90	3.50	47.9	55.3	58.9	70.4	69.3	61.1
MAX	91	87	88	8.2	4.4	4.2	87	70	75	90	87	88
MIN	58	5.9	5.6	3.9	3.5	3.1	3.2	43	48	53	52	28
AC-FT	4850	1170	1790	335	217	215	2850	3400	3500	4330	4260	3640

CAL YR 1988 TOTAL 15948.6 MEAN 43.6 MAX 97 MIN 3.6 AC-FT 31630
WTR YR 1989 TOTAL 15405.1 MEAN 42.2 MAX 91 MIN 3.1 AC-FT 30560

09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE

LOCATION.--Lat 39°07'45", long 109°01'36", in SE¼NW¼ sec.5, T.11 S., R.104 W., Mesa County, Hydrologic Unit 14010005, on right bank 0.7 mi downstream from McDonald Creek, 12 mi southwest of Mack, Colo., and 1.5 mi upstream from Colorado-Utah State line.

DRAINAGE AREA.--17,843 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1951 to current year.

REVISED RECORDS.--WRD Colo. 1974: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,325 ft above National Geodetic Vertical Datum of 1929, from topographic map. May 1951, to October 1979, water-stage recorder at site 5.7 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Jan. 6 to Mar. 4, and June 18-21. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power development, and diversions for irrigation. (Records include all return flow from irrigated areas).

AVERAGE DISCHARGE.--38 years, 6,299 ft³/s; 4,564,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,800 ft³/s, May 27, 1984, gage height, 16.12 ft, (from highwater mark); minimum daily, 960 ft³/s, Sept. 7, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,970 ft³/s at 0930 May 19, gage height, 4.37 ft, maximum gage height, 7.84 ft (backwater from ice); minimum daily discharge, 1,950 ft³/s, Feb. 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3570	3020	3120	2390	2960	3500	4270	4720	8980	3900	3990	2560
2	3580	3140	2940	2740	2970	3560	4130	4340	8290	3790	3640	2540
3	3440	3130	3060	2980	3000	3800	4070	3950	8110	3630	3520	2500
4	3390	3150	3070	2770	3020	3760	3960	3730	7880	3410	3520	2610
5	3210	3580	3050	2900	2990	3690	4050	3690	7290	3240	3380	2680
6	2930	3220	3040	2880	2900	3440	3970	3550	6570	3120	3120	2720
7	3080	3140	2980	2800	2300	3370	4050	3520	6890	2960	2880	2610
8	3240	3160	2990	2600	1950	3580	4370	3930	6590	2840	2720	2590
9	3270	3230	3010	2400	2000	3860	5050	4870	6590	2930	2610	2730
10	3210	3320	2850	2300	2300	4180	5870	6680	6570	2950	2600	2800
11	3260	3500	2750	2200	2700	4450	5900	7960	6430	2890	2690	2940
12	3250	3740	2870	2100	2800	4580	5400	8440	6840	2960	2970	2970
13	3250	3760	2940	2500	2900	4630	5150	8290	6940	3040	3360	3010
14	3280	3420	2880	2400	2850	4820	4840	7530	6970	3220	3470	3060
15	3240	3450	2900	2350	2800	4370	4680	7170	6090	3200	3500	3120
16	3230	3560	3180	2300	2780	3600	4750	6450	5850	2950	3660	3140
17	3120	3550	2950	2400	2760	4000	5060	5840	6240	2720	3410	2960
18	3080	3420	2790	2500	2900	4140	5640	5740	6800	2420	3410	2860
19	3010	3360	2780	2600	3000	3570	6170	5380	6800	2270	3720	2740
20	2910	3340	2860	2700	3100	3420	6740	5790	6300	2230	3850	2740
21	2920	3280	2880	2600	3050	3580	7170	7120	6100	2190	3790	2920
22	3010	3110	2860	2550	3000	3590	7850	8350	5950	2250	3870	3090
23	3050	3120	2870	2500	2980	3620	8170	8790	5410	2350	3820	3130
24	3020	3240	2880	2550	2990	3730	8090	9320	4860	2710	3510	3130
25	2950	3280	2880	2600	3000	3980	8310	9460	4490	2900	3290	3110
26	2990	3280	2870	2800	3200	4230	8040	9300	4410	3350	3140	2990
27	3040	3280	2840	2650	3500	4680	7710	8120	4430	3400	3030	2940
28	3140	3190	2690	2680	3400	4780	7030	7720	4230	3440	2980	2910
29	3120	2970	2680	2800	---	4540	6100	8070	4140	3320	2890	2890
30	3030	2930	2440	2900	---	4330	5350	8880	3980	3870	2730	2870
31	3030	---	2210	2950	---	4560	---	9480	---	4530	2640	---
TOTAL	97850	98870	89110	80390	80100	123940	171940	206180	187020	94980	101710	85860
MEAN	3156	3296	2875	2593	2861	3998	5731	6651	6234	3064	3281	2862
MAX	3580	3760	3180	2980	3500	4820	8310	9480	8980	4530	3990	3140
MIN	2910	2930	2210	2100	1950	3370	3960	3520	3980	2190	2600	2500
AC-FT	194100	196100	176700	159500	158900	245800	341000	409000	371000	188400	201700	170300

CAL YR 1988 TOTAL 1667020 MEAN 4555 MAX 15000 MIN 2210 AC-FT 3307000
WTR YR 1989 TOTAL 1417950 MEAN 3885 MAX 9480 MIN 1950 AC-FT 2813000

09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE--Continued
(National stream-quality accounting network station)

PERIOD OF RECORD.--October 1979 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1979 to current year.
WATER TEMPERATURE: October 1979 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1979.

REMARKS.--Water-quality data collection was moved 5.5 miles upstream to this site from previous site 09163530. Water-quality records for this site are considered to be equivalent to data obtained at old site. Daily maximum and minimum specific-conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,940 microsiemens Aug. 13, 1981; minimum, 277 microsiemens June 11, 1986.
WATER TEMPERATURE: Maximum, 27.0°C Aug. 7-9, 1981; minimum, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,930 microsiemens Jan. 3; minimum, 520 microsiemens April 25-26.
WATER TEMPERATURE: Maximum, 26.6°C July 8; minimum, 0.0°C on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
OCT										
18...	1300	3020	1470	8.3	13.5	17	9.0	95	120	520
NOV										
10...	1100	3330	1480	8.1	9.0	--	--	--	--	480
DEC										
06...	1300	2980	1390	8.2	1.0	22	12.2	K8	66	490
JAN										
11...	1300	1990	--	8.1	0.0	--	--	--	--	440
FEB										
28...	1200	3280	1350	8.1	--	--	--	--	--	350
MAR										
21...	1335	3530	1210	8.2	7.5	61	10.2	K7	K42	350
APR										
18...	1300	5730	770	8.1	14.5	130	8.5	92	290	240
MAY										
16...	1100	6670	724	8.1	13.0	--	--	--	--	250
JUN										
13...	1300	7120	820	8.0	17.5	38	9.6	110	210	280
JUL										
18...	1215	2380	1470	8.2	22.0	--	--	--	--	520
AUG										
22...	1400	3990	1380	8.2	19.0	160	8.4	260	560	480
SEP										
07...	1300	2650	1490	8.3	19.0	--	--	--	--	530

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY DIS-SOLVED FIELD (MG/L AS CACO3)	ALKA-LINITY LAB (MG/L AS CACO3)	BICAR-BONATE DIS-SOLVED FIELD (MG/L AS HCO3)	CAR-BONATE DIS-SOLVED FIELD (MG/L AS CO3)
OCT									
18...	130	48	130	3	4.4	174	171	185	13
NOV									
10...	120	45	150	3	4.5	--	180	--	--
DEC									
06...	120	43	130	3	4.3	174	184	212	0
JAN									
11...	110	39	140	3	4.9	--	188	--	--
FEB									
28...	97	33	130	3	4.6	--	166	--	--
MAR									
21...	88	32	120	3	4.0	159	165	194	0
APR									
18...	63	20	60	2	3.0	118	121	144	0
MAY									
16...	66	20	50	1	2.4	--	117	--	--
JUN									
13...	76	22	57	2	2.6	124	118	151	0
JUL									
18...	140	41	110	2	5.0	--	166	--	--
AUG									
22...	130	38	110	2	4.4	158	173	193	0
SEP									
07...	140	43	120	2	4.5	--	164	--	--

K Based on non-ideal colony count

09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)
OCT									
18...	460	110	0.30	7.1	1050	997	1.43	8560	--
NOV									
10...	420	140	0.40	9.8	--	1000	1.36	9000	--
DEC									
06...	420	120	0.40	10	990	963	1.35	7970	0.99
JAN									
11...	370	140	0.30	12	--	933	1.27	5010	--
FEB									
28...	350	110	0.40	9.1	--	827	1.13	7330	--
MAR									
21...	300	110	0.40	11	770	769	1.05	7340	0.64
APR									
18...	180	51	0.20	9.3	484	461	0.66	7490	0.37
MAY									
16...	190	44	0.30	8.9	--	454	0.62	8180	--
JUN									
13...	210	51	0.30	7.5	537	500	0.73	10300	--
JUL									
18...	440	92	0.30	9.5	--	943	1.28	6060	--
AUG									
22...	410	93	0.50	12	942	908	1.28	10100	--
SEP									
07...	500	96	0.50	6.9	--	1010	1.38	7250	--

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
OCT									
18...	<0.01	0.69	0.04	0.04	0.46	0.50	0.02	0.02	<0.01
NOV									
10...	--	0.87	--	--	--	--	--	--	--
DEC									
06...	0.01	1.00	0.06	0.07	0.44	0.50	0.06	0.02	0.01
JAN									
11...	--	1.00	--	--	--	--	--	--	--
FEB									
28...	--	0.82	--	--	--	--	--	--	--
MAR									
21...	0.04	0.68	0.21	0.18	0.29	0.50	0.19	0.09	0.01
APR									
18...	0.01	0.38	0.06	0.07	1.0	1.1	0.05	0.05	0.02
MAY									
16...	--	0.56	--	--	--	--	--	--	--
JUN									
13...	<0.01	0.47	0.02	0.02	0.58	0.60	0.03	0.02	0.02
JUL									
18...	--	1.20	--	--	--	--	--	--	--
AUG									
22...	<0.01	1.00	0.04	0.04	0.36	0.40	0.15	0.03	0.03
SEP									
07...	--	1.00	--	--	--	--	--	--	--

DATE	TIME	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT											
18...	1300	10	1	53	<0.5	<1	1	<3	10	28	<5
MAR											
21...	1335	10	1	61	<0.5	<1	<1	<3	3	10	<5
JUN											
13...	1300	60	<1	48	<0.5	<1	2	<3	7	43	<1
AUG											
22...	1400	40	1	69	<0.5	<1	1	<3	4	38	<1

09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT										
18...	64	8	<0.1	<10	1	8	<1.0	1500	<6	18
MAR										
21...	36	15	<0.1	<10	<1	5	<1.0	940	<6	<3
JUN										
13...	29	4	<0.1	<10	3	4	<1.0	760	<6	<3
AUG										
22...	57	4	<0.1	<10	1	7	<1.0	1400	<6	11

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
13...	1300	3020	87	709	63
DEC					
06...	1300	2980	124	998	66
MAR					
21...	1335	3530	163	1550	85
APR					
18...	1300	5730	367	5680	84
JUN					
13...	1300	7120	154	2970	76
AUG					
22...	1400	3990	351	3780	92

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1280	1460	1440	1780	---	1280	933	773	578	1080	1440	1480
2	1270	1440	1450	1840	---	1300	987	836	610	1090	1400	1500
3	1290	1440	1400	1880	---	1240	1010	893	643	1110	1390	1500
4	1300	1460	1380	1820	---	1120	1030	939	666	1150	1430	1490
5	1300	1440	1380	1770	---	1120	1020	971	703	1180	1440	1470
6	1340	1440	1410	---	---	1160	1010	989	761	1220	1470	1470
7	1450	1460	1420	---	---	1190	960	1010	791	1260	1490	1480
8	1410	1450	1410	---	---	1170	920	1000	793	1290	1530	1480
9	1400	1440	1400	---	---	1160	891	920	794	1310	1520	1490
10	1370	1460	1460	---	---	1050	839	738	798	1300	1580	1470
11	1370	1460	1470	---	---	999	738	646	816	1290	1720	1490
12	1370	1450	1490	---	---	920	695	569	817	1310	1740	1500
13	1350	1380	1520	---	---	885	691	557	825	1330	1700	1440
14	1360	1420	1500	---	---	979	744	588	835	1340	1640	1410
15	1380	1430	1480	---	---	1110	773	640	842	1310	1620	1410
16	1380	1410	1470	---	---	1120	773	706	872	1320	1530	1410
17	1370	1420	1510	---	---	1120	757	765	850	1350	1420	1410
18	1400	1410	1500	---	---	1000	728	820	---	1400	1440	1420
19	1420	1410	1540	---	---	997	692	852	---	1480	1460	1440
20	1430	1430	1570	---	---	1090	657	849	---	1550	1490	1460
21	1440	1430	1560	---	---	1140	620	788	---	1590	1420	1460
22	1440	1430	1590	---	---	1160	584	696	793	1600	1390	1450
23	1440	1440	1600	---	---	1150	544	631	839	1590	1360	1440
24	1430	1450	1600	---	---	1120	535	590	898	1600	1360	1400
25	1430	1440	1620	---	---	1110	531	558	972	1550	1370	1380
26	1420	1420	1620	---	---	1090	526	563	1030	1470	1390	1380
27	1460	1390	1460	---	1260	1050	539	588	1030	1480	1410	1390
28	1430	1380	1460	---	1280	996	564	647	1030	1450	1420	1410
29	1440	1400	1550	---	---	956	617	676	1040	1470	1430	1410
30	1430	1420	1580	---	---	934	692	640	1060	1440	1460	1420
31	1440	---	1630	---	---	964	---	597	---	1420	1480	---
MEAN	1390	1430	1500	---	---	1090	754	745	---	1370	1480	1450

09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.0	13.7	11.1	10.0	1.2	.0	.0	.0	.0	.0	6.3	3.7
2	16.4	14.2	10.6	9.4	1.6	.1	.0	.0	.0	.0	5.4	4.8
3	16.5	14.4	11.1	10.0	1.8	.5	.0	.0	.0	.0	4.8	3.7
4	16.0	14.7	11.0	9.8	2.1	.7	.0	.0	.0	.0	4.3	2.1
5	16.4	14.4	9.7	8.5	2.0	.7	.0	.0	.0	.0	3.4	1.6
6	15.9	14.9	8.8	7.8	1.9	.6	.0	.0	.0	.0	5.2	2.3
7	15.4	14.1	8.2	7.1	2.9	1.6	.0	.0	.0	.0	6.6	4.0
8	15.9	13.9	8.6	7.2	2.6	1.6	.0	.0	.0	.0	8.6	5.9
9	15.1	13.9	9.0	7.9	1.9	1.0	.0	.0	.0	.0	10.5	7.9
10	14.8	12.8	9.1	8.0	1.6	.5	.0	.0	.0	.0	11.1	9.3
11	14.7	12.8	8.4	7.6	1.6	.5	.0	.0	.0	.0	11.3	10.0
12	13.9	12.5	7.8	6.7	1.6	.4	.0	.0	.0	.0	11.2	10.2
13	14.4	12.1	7.3	6.4	1.5	.3	.0	.0	.0	.0	10.8	9.7
14	14.4	13.0	7.6	6.5	1.2	.4	.0	.0	.0	.0	9.7	7.7
15	14.6	12.9	7.6	6.3	1.8	.9	.0	.0	.0	.0	8.0	6.8
16	14.7	12.9	6.2	5.5	1.7	.6	.0	.0	.0	.0	8.6	6.7
17	14.9	13.0	5.5	4.5	1.3	.4	.0	.0	.0	.0	8.4	7.3
18	15.0	13.4	5.2	4.3	.9	.1	.0	.0	.0	.0	8.7	7.0
19	14.9	13.2	4.4	3.6	1.3	.3	.0	.0	.0	.0	8.8	7.7
20	14.4	12.9	4.0	3.0	1.9	1.1	.0	.0	.0	.0	8.9	7.9
21	14.0	12.4	3.4	2.4	1.3	.9	.0	.0	.0	.0	8.9	6.8
22	13.3	12.1	3.2	2.2	1.2	.2	.0	.0	.0	.0	9.8	7.6
23	13.0	11.5	3.7	2.3	1.7	1.0	.0	.0	.9	.0	11.1	8.8
24	12.6	11.1	4.2	3.0	.7	.0	.0	.0	2.3	.9	12.0	10.0
25	12.1	10.9	4.4	3.4	.7	.0	.0	.0	3.4	1.3	12.5	10.7
26	11.8	10.3	4.2	3.4	.7	.0	.0	.0	3.4	2.0	11.7	10.3
27	11.4	10.3	3.4	2.4	.0	.0	.0	.0	4.4	2.1	11.5	9.7
28	11.3	10.0	2.4	1.5	.0	.0	.0	.0	5.1	3.0	11.9	9.7
29	11.2	10.0	1.7	.7	.0	.0	.0	.0	---	---	11.4	10.7
30	11.9	10.3	1.3	.3	.0	.0	.0	.0	---	---	10.6	9.8
31	11.8	10.3	---	---	.0	.0	.0	.0	---	---	10.4	9.1
MONTH	16.5	10.0	11.1	.3	2.9	.0	.0	.0	5.1	.0	12.5	1.6

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.2	9.5	13.1	11.4	17.0	14.2	22.8	20.5	23.9	22.5	21.2	18.8
2	10.7	8.7	14.5	12.7	17.3	15.2	23.0	20.5	23.9	22.1	21.3	19.4
3	11.4	10.0	15.3	13.9	17.1	15.2	23.6	20.7	23.9	22.0	20.7	19.1
4	10.7	8.8	16.6	13.9	16.5	14.7	24.1	21.1	24.1	22.0	20.7	18.7
5	11.8	9.6	17.3	14.9	---	---	24.6	21.8	24.9	22.5	21.4	18.7
6	13.3	10.5	18.2	15.4	---	---	25.3	22.1	24.5	22.2	20.8	19.3
7	14.5	12.0	19.4	16.8	---	---	26.1	23.2	24.5	22.0	20.7	19.0
8	15.0	13.0	19.7	17.4	---	---	26.6	23.4	24.3	21.6	20.2	18.6
9	14.6	13.1	19.8	18.4	---	---	26.3	23.4	23.4	22.3	19.4	16.8
10	13.2	11.7	18.7	17.1	---	---	25.5	23.7	24.2	22.0	19.8	17.5
11	12.5	11.0	17.5	15.6	---	---	24.7	22.2	24.1	22.2	18.6	16.7
12	12.8	11.1	15.4	13.2	---	---	25.3	22.7	24.9	22.4	17.0	15.9
13	12.7	10.8	13.9	11.9	---	---	25.5	22.9	25.3	22.8	17.5	14.7
14	13.3	11.7	14.4	13.0	20.1	17.9	25.6	23.2	24.1	21.9	17.5	15.0
15	14.0	12.0	13.9	12.7	21.0	19.0	25.1	22.8	23.5	20.9	17.7	15.2
16	15.0	13.0	14.4	12.6	21.3	20.3	23.9	22.1	23.5	21.0	17.5	15.4
17	15.2	14.1	15.3	12.3	21.4	19.7	23.2	21.6	22.1	20.8	18.4	16.0
18	16.1	14.4	16.4	14.4	---	---	25.2	21.7	22.6	19.8	18.7	16.7
19	15.7	14.2	17.1	15.5	---	---	25.8	23.2	23.2	21.0	18.8	16.7
20	15.6	14.6	17.7	15.4	---	---	26.5	23.4	22.1	20.5	18.4	17.0
21	15.3	14.2	18.3	16.7	---	---	26.1	24.2	21.5	19.5	18.3	16.0
22	15.1	13.7	18.0	16.2	17.4	15.9	26.2	24.4	21.1	18.5	18.4	16.3
23	14.1	12.4	17.8	16.2	17.1	16.2	26.3	24.0	22.2	19.6	18.4	16.2
24	14.1	12.5	16.4	14.7	18.7	16.6	25.8	24.1	20.9	19.3	19.0	16.7
25	13.9	12.6	16.0	14.1	19.5	17.2	25.6	23.2	20.9	18.5	18.8	16.5
26	13.9	12.4	15.8	13.2	20.3	17.6	24.7	22.8	21.3	18.5	18.3	16.5
27	12.9	11.8	16.2	13.7	21.0	18.7	24.0	22.3	21.3	18.3	18.6	16.3
28	12.1	10.7	17.2	14.6	22.0	19.9	24.1	22.5	21.7	18.9	18.8	16.5
29	11.6	10.1	17.4	15.5	22.5	19.9	25.0	22.4	21.5	19.0	19.0	16.9
30	12.5	10.3	17.4	15.1	22.6	20.3	24.7	21.8	21.2	19.3	18.2	16.7
31	---	---	16.6	14.2	---	---	24.6	23.0	21.0	19.2	---	---
MONTH	16.1	8.7	19.8	11.4	---	---	26.6	20.5	25.3	18.5	21.4	14.7

09165000 DOLORES RIVER BELOW RICO, CO

LOCATION.--Lat 37°38'20", long 108°03'35", Dolores County, Hydrologic Unit 14030002, on left bank at upstream side of Montelores bridge northwest of State Highway 145 (relocated), at Dolores-Montezuma County line, 0.5 mi upstream from Ryman Creek, and 4.0 mi southwest of Rico.

DRAINAGE AREA.--105 mi^2.

PERIOD OF RECORD.--October 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 8,422.23 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 13 to Mar. 30. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--38 years, 138 ft^3/s; 99,980 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,170 ft^3/s, May 24, 1984, gage height, 5.95 ft; from rating curve extended above 1,620 ft^3/s, maximum gage height, 6.15 ft, June 10, 1952; minimum daily discharge, 7.0 ft^3/s, Nov. 16-17, 1956, Feb. 6-7, 1961.

EXTREMES OUTSIDE PERIOD OF RECORD.--Greatest flood since at least 1885 occurred Oct. 5, 1911.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 10	2400	*644	*4.77				

Minimum daily, 17 ft^3/s, Dec. 28-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	30	22	19	20	36	89	158	366	70	99	31
2	50	30	22	20	21	38	84	141	333	67	109	30
3	48	29	22	20	22	32	81	151	297	65	77	30
4	47	31	22	20	21	28	80	171	275	61	63	30
5	50	24	22	20	22	28	83	221	251	61	56	34
6	56	25	20	20	20	30	111	297	256	59	51	31
7	66	27	20	20	20	32	164	369	251	56	48	29
8	63	27	21	20	20	38	214	415	248	54	45	31
9	54	31	21	20	20	46	229	534	233	53	45	30
10	49	27	20	20	20	60	275	576	223	54	44	27
11	47	32	20	20	20	70	301	568	210	59	45	27
12	46	29	19	20	20	72	221	425	215	68	58	27
13	45	26	19	20	20	51	183	332	203	56	49	30
14	43	26	19	20	20	40	178	297	200	52	54	27
15	42	26	20	20	20	75	204	255	199	48	46	25
16	41	24	22	20	20	80	229	223	210	45	49	25
17	40	24	22	20	20	80	262	208	213	43	43	24
18	39	24	22	20	20	93	285	232	203	41	90	26
19	38	22	20	20	22	85	310	297	188	40	55	26
20	36	20	21	20	22	75	341	375	168	40	52	50
21	35	20	19	20	22	70	379	466	151	43	60	35
22	34	20	19	20	22	80	403	523	129	42	50	29
23	34	20	19	19	24	90	380	555	112	61	43	27
24	34	20	18	19	26	100	352	540	104	125	41	27
25	33	24	18	20	26	110	345	505	97	72	39	26
26	32	28	18	20	28	110	318	453	92	62	38	25
27	31	26	18	20	30	100	252	460	86	73	36	25
28	30	24	17	20	32	95	211	503	83	67	36	23
29	31	22	17	20	---	100	188	492	80	77	34	22
30	34	20	17	20	---	100	172	449	74	90	33	22
31	30	---	18	20	---	96	---	393	---	69	32	---
TOTAL	1310	757	615	617	620	2184	6836	11594	5757	1876	1600	851
MEAN	42.3	25.2	19.8	19.9	22.1	70.5	228	374	192	60.5	51.6	28.4
MAX	66	32	22	20	32	110	403	576	366	125	109	50
MIN	30	20	17	19	20	28	80	141	74	40	32	22
AC-FT	2600	1500	1220	1220	1230	4330	13560	23000	11420	3720	3170	1690

CAL YR 1988 TOTAL 37496 MEAN 102 MAX 656 MIN 15 AC-FT 74370
WTR YR 1989 TOTAL 34617 MEAN 94.8 MAX 576 MIN 17 AC-FT 68660

09166500 DOLORES RIVER AT DOLORES, CO

LOCATION.--Lat 37°28'21", long 108°29'49", in SW¼SW¼ sec.10, T.37 N., R.15 W., Montezuma County, Hydrologic Unit 14030002, on left bank 0.25 mi upstream from bridge on State Highway 184 in Dolores and 0.8 mi upstream from Lost Canyon Creek.

DRAINAGE AREA.--504 mi².

PERIOD OF RECORD.--June 1895 to October 1903, August 1910 to November 1912, October 1921 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 859: 1937. WRD Colo. 1972: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,940 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1713 or 1733 for history of changes prior to Oct. 7, 1952. Oct. 7, 1952 to Nov. 16, 1983, at site 0.4 mi downstream at different datum.

REMARKS.--Estimated daily discharges: Nov. 18, 20-24, and Nov. 27 to Mar. 8. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 2,000 acres upstream from station. Flow partly regulated by Ground Hog Reservoir, capacity, 21,710 acre-ft. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--78 years (water years 1896-1903, 1911-12, 1922-89), 438 ft³/s; 317,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,000 ft³/s, Oct. 5, 1911, gage height, 10.2 ft, site and datum then in use, from rating curve extended above 2,800 ft³/s; minimum daily, 8.0 ft³/s, Aug. 16, 1896.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1885, that of Oct. 5, 1911.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 9	0300	*1,810	*4.62	No other peak greater than base discharge			

Minimum daily, 46 ft³/s, Sept. 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	79	70	60	65	120	652	653	821	194	257	101
2	124	75	70	60	65	110	599	624	763	191	327	97
3	118	75	70	65	65	90	581	651	683	187	255	97
4	115	73	70	65	70	85	635	692	613	180	212	95
5	114	73	65	65	70	90	647	785	547	177	191	105
6	119	65	60	70	65	100	766	989	555	170	178	104
7	141	68	65	70	60	120	994	1280	520	167	170	96
8	150	69	70	65	60	150	1260	1420	513	157	161	89
9	139	84	70	60	60	268	1360	1670	506	156	155	91
10	131	83	65	60	60	386	1330	1690	468	148	152	87
11	120	96	60	60	60	484	1230	1610	441	167	152	84
12	114	84	60	65	60	488	1230	1330	430	195	162	85
13	109	79	60	65	65	502	976	1070	434	184	169	91
14	106	91	60	65	65	543	949	948	401	160	155	94
15	102	114	65	60	65	478	1070	859	405	150	148	92
16	98	83	70	60	65	493	1220	753	413	141	147	58
17	95	78	70	60	65	553	1330	706	420	134	147	51
18	91	70	70	60	70	521	1390	670	397	127	185	46
19	87	63	65	60	70	560	1490	789	377	120	234	47
20	85	60	60	65	70	559	1480	953	350	115	174	52
21	85	60	60	65	70	470	1570	1150	318	115	180	75
22	95	60	60	65	70	490	1670	1290	277	114	173	59
23	83	60	60	60	75	560	1570	1330	240	151	154	53
24	78	65	55	60	80	654	1620	1290	218	315	140	51
25	77	86	55	60	85	726	1490	1240	209	310	132	48
26	75	90	55	65	90	752	1390	1060	198	225	123	48
27	74	80	55	65	90	658	1140	1010	180	257	120	47
28	73	70	50	65	110	626	929	1110	177	245	119	48
29	72	65	50	65	---	685	799	1150	174	236	113	48
30	83	65	55	65	---	619	711	1030	171	282	107	47
31	82	---	55	65	---	567	---	895	---	231	103	---
TOTAL	3155	2263	1925	1960	1965	13507	34078	32697	12219	5701	5195	2186
MEAN	102	75.4	62.1	63.2	70.2	436	1136	1055	407	184	168	72.9
MAX	150	114	70	70	110	752	1670	1690	821	315	327	105
MIN	72	60	50	60	60	85	581	624	171	114	103	46
AC-FT	6260	4490	3820	3890	3900	26790	67590	64850	24240	11310	10300	4340

CAL YR 1988 TOTAL 117088 MEAN 320 MAX 2240 MIN 50 AC-FT 232200
WTR YR 1989 TOTAL 116851 MEAN 320 MAX 1690 MIN 46 AC-FT 231800

09166950 LOST CANYON CREEK NEAR DOLORES, CO

LOCATION.--Lat 37°26'46", long 108°28'07", in SE¼SE¼ sec.23, T.37N., R.15W., Montezuma County, Hydrologic Unit 14030002, on right bank 3 mi upstream from mouth, and 2.5 mi southeast of Dolores

DRAINAGE AREA.--71.3 mi².

PERIOD OF RECORD.--April 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,030 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 11-23, 25-29, Dec. 5, 6, 20-26, 28, Dec. 30 to Jan. 7, Jan. 9-11, 13, 14, Jan. 17 to Feb. 5 and Feb. 8 to Mar. 11. Records good except for estimated daily discharges, which are poor. Several small storage reservoirs and diversions for irrigation of about 4,700 acres in the San Juan River basin and one diversion for irrigation of about 10 acres in Lost Canyon in the Dolores River basin. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE--5 years, 29.0 ft³/s; 21,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 744 ft³/s, Apr. 2, 1986, gage height, 7.23 ft; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 238 ft³/s at 0130 Apr. 9, gage height, 4.56 ft; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.44	.16	.95	.90	1.0	10	54	37	.13	.01	.14	.00
2	.22	.17	1.2	.90	1.0	9.5	38	11	.11	.01	.18	.00
3	.23	.10	1.3	.95	1.1	9.0	28	3.8	.11	.01	.15	.00
4	.18	.05	1.1	.95	1.1	8.5	53	2.4	.10	.01	.08	.00
5	.10	.02	.95	.95	1.0	8.0	54	1.8	.10	.00	.04	.00
6	.02	.02	1.0	1.0	.45	8.0	76	1.6	.08	.00	.02	.00
7	.01	.03	1.1	.95	.61	7.5	119	1.3	.09	.00	.02	.00
8	.01	.05	1.2	.92	.95	9.0	153	1.6	.14	.00	.01	.00
9	.01	.06	.77	.90	1.2	15	152	1.4	.19	.00	.01	.00
10	.02	.09	.43	.90	1.6	26	117	21	.20	.00	.01	.00
11	.15	.80	.35	.85	1.9	48	85	22	.20	.00	.01	.00
12	.21	.80	.27	.81	2.2	62	81	15	.19	.00	.01	.00
13	.11	.75	.31	.80	2.0	69	39	7.5	.17	.00	.13	.00
14	.15	.80	.46	.80	1.9	86	34	2.5	.16	.00	.17	.00
15	.13	.80	.65	.75	1.9	77	33	1.3	.13	.00	.19	.00
16	.07	.80	.69	.73	1.8	68	43	1.1	.09	.00	.17	.00
17	.03	.80	.52	.80	1.8	78	40	1.0	.08	.00	.14	.00
18	.02	.75	.61	.90	1.9	75	44	.84	.08	.00	.16	.00
19	.01	.70	.81	.90	1.9	82	78	.56	.11	.00	.18	.00
20	.01	.70	.85	.90	2.0	84	85	.49	.10	.00	.19	.00
21	.01	.65	.85	.90	1.8	76	133	.32	.09	.00	.19	.00
22	.01	.65	.85	.85	1.7	77	144	.27	.09	.00	.11	.00
23	.01	.70	.80	.85	2.0	80	116	.25	.10	.00	.06	.00
24	.01	.83	.80	.90	2.6	59	107	.25	.08	.00	.02	.00
25	.01	.85	.80	1.0	3.6	69	89	.22	.07	.00	.01	.00
26	.00	.85	.80	1.0	5.5	69	82	.20	.05	.00	.01	.00
27	.00	.85	.76	.90	8.5	48	63	.19	.03	.00	.01	.00
28	.00	.75	.75	1.0	10	48	54	.17	.03	.01	.01	.00
29	.00	.80	.75	1.0	---	55	47	.15	.02	.01	.01	.00
30	.01	.88	.80	.95	---	48	41	.14	.02	.01	.00	.00
31	.09	---	.80	.95	---	29	---	.13	---	.03	.00	---
TOTAL	2.28	16.26	24.28	27.86	65.01	1497.5	2282	137.48	3.14	0.10	2.44	0.00
MEAN	.074	.54	.78	.90	2.32	48.3	76.1	4.43	.10	.003	.079	.00
MAX	.44	.88	1.3	1.0	10	86	153	37	.20	.03	.19	.00
MIN	.00	.02	.27	.73	.45	7.5	28	.13	.02	.00	.00	.00
AC-FT	4.5	32	48	55	129	2970	4530	273	6.2	.2	4.8	.0

CAL YR 1988 TOTAL 3103.66 MEAN 8.48 MAX 110 MIN .00 AC-FT 6160
WTR YR 1989 TOTAL 4058.35 MEAN 11.1 MAX 153 MIN .00 AC-FT 8050

09169500 DOLORES RIVER AT BEDROCK, CO

LOCATION.--Lat 38°18'37", long 108°53'05", in NW¼SW¼ sec.20, T.47 N., R.18 W., Montrose County, Hydrologic Unit 14030002, on right bank at upstream side of bridge, 0.4 mi southeast of Bedrock, and 3.1 mi upstream from East Paradox Creek.

DRAINAGE AREA.--2,024 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1917 to September 1922 (monthly discharge only for some periods, published in WSP 1313), August 1971 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,940 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Aug. 1, 1971, nonrecording gage at different datum.

REMARKS.--Estimated daily discharges: Nov. 27, 28, Dec. 2-8, and Dec. 11 to Feb. 25. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 5,000 acres upstream from station, and about 74,760 acres in the San Juan River basin. Flow regulated since March 19, 1984, by McPhee Reservoir, capacity 381,000 acre-ft.

AVERAGE DISCHARGE.--17 years (water years 1918-22, 1972-83), 497 ft³/s; 360,100 acre-ft/yr, prior to completion of McPhee Reservoir. 6 years (water years 1984-89), 464 ft³/s; 336,200 acre-ft/yr, subsequent to completion of McPhee Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,280 ft³/s, Apr. 30, 1973, gage height, 12.09 ft, from floodmarks, from rating curve extended above 8,700 ft³/s; no flow, Sept. 13, 1974, Aug. 15 to 18, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 6, 1970, reached a stage of 7.15 ft, present datum, from floodmarks (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,010 ft³/s at 1400 Apr. 22, gage height, 4.94 ft; minimum daily, 29 ft³/s, Sept. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	77	84	70	85	149	221	634	93	58	85	57
2	76	77	85	75	85	126	279	622	174	56	82	57
3	76	77	85	80	80	140	320	618	176	56	93	57
4	75	77	85	85	80	138	324	618	162	56	83	57
5	83	76	85	85	75	116	461	618	122	58	78	59
6	102	76	85	85	75	96	461	614	117	60	76	59
7	95	76	85	80	70	102	461	610	114	60	70	58
8	59	77	85	75	70	100	519	618	110	60	68	56
9	57	77	87	75	75	121	642	626	79	60	66	56
10	60	77	86	75	80	179	694	634	74	61	66	57
11	74	95	80	70	90	261	858	634	72	60	69	59
12	76	97	80	70	95	369	907	634	75	65	71	60
13	75	112	80	70	100	421	893	630	80	69	66	60
14	75	90	80	70	100	467	924	630	101	68	65	51
15	75	91	80	70	95	521	930	622	80	64	71	33
16	75	132	80	75	95	418	942	466	75	62	66	30
17	75	109	80	75	95	452	957	241	71	61	65	29
18	75	93	80	80	100	500	972	220	69	60	71	59
19	75	85	80	75	110	443	985	187	68	60	135	59
20	75	83	80	80	120	481	988	148	65	60	103	66
21	72	83	80	80	120	456	990	140	64	60	90	74
22	75	84	80	80	110	333	994	135	65	60	87	80
23	75	84	80	85	110	293	995	133	65	62	80	67
24	75	84	60	85	120	327	995	131	66	65	68	65
25	75	86	60	90	130	355	995	109	63	69	63	64
26	75	86	60	90	158	345	1000	94	59	99	62	64
27	76	75	55	90	168	323	857	93	59	162	57	64
28	76	70	60	90	178	329	666	89	59	119	53	65
29	76	69	60	85	---	301	650	82	59	193	53	64
30	76	72	60	85	---	271	638	79	58	168	53	64
31	77	---	60	85	---	250	---	79	---	143	54	---
TOTAL	2336	2547	2367	2465	2869	9153	22518	11788	2594	2414	2266	1741
MEAN	75.4	84.9	76.4	79.5	102	295	751	380	86.5	77.9	73.1	58.0
MAX	102	132	87	90	178	521	1000	634	176	193	135	80
MIN	57	69	55	70	70	96	221	79	58	56	53	29
AC-FT	4630	5050	4690	4890	5690	18150	44660	23380	5150	4790	4490	3450

CAL YR 1988 TOTAL 69377 MEAN 190 MAX 1240 MIN 55 AC-FT 137600
WTR YR 1989 TOTAL 65057 MEAN 178 MAX 1000 MIN 29 AC-FT 129000

09169500 DOLORES RIVER AT BEDROCK, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1979 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1979 to current year.
WATER TEMPERATURES: November 1979 to current year.

INSTRUMENTATION.--Water-quality monitor since November 1979.

REMARKS.--Daily maximum and minimum specific-conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 6,970 microsiemens Aug. 14, 1987; minimum, 140 microsiemens May 25, 1983.
WATER TEMPERATURES: Maximum, 33.5°C Aug. 7, 1981; minimum, -0.5°C Dec. 3-8, 1982.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 3,620 microsiemens Aug.3; minimum recorded, 390 microsiemens April 24,26,27.
WATER TEMPERATURES: Maximum recorded, 29.0°C July 21; minimum recorded, 0.0°C many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO
OCT											
06...	1510	80	691	--	18.0	180	55	48	14	69	2
NOV											
22...	1140	84	842	8.0	1.0	250	130	62	24	69	2
DEC											
09...	0950	89	620	8.7	0.0	190	60	50	17	58	2
JAN											
04...	1500	85	--	8.4	0.0	190	34	52	14	56	2
FEB											
13...	1200	E100	678	8.1	0.0	200	76	54	17	61	2
APR											
20...	0930	991	409	8.6	11.0	160	50	46	12	18	0.6
MAY											
17...	1240	242	460	8.4	13.0	160	43	45	11	32	1
JUN											
12...	1230	72	679	8.6	21.0	180	53	47	14	66	2
JUL											
06...	1400	60	650	8.5	27.5	150	28	42	11	60	2
AUG											
17...	0800	65	585	8.1	20.5	170	43	47	12	51	2
SEP											
05...	1630	59	594	8.5	22.5	150	32	44	10	48	2

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
OCT										
06...	3.5	123	74	93	0.20	3.3	379	0.52	81.8	<0.100
NOV										
22...	3.1	128	170	76	0.10	4.9	486	0.66	110	<0.100
DEC										
09...	3.0	135	81	75	0.10	5.3	370	0.50	89.0	<0.100
JAN										
04...	3.4	154	58	86	0.20	5.8	368	0.50	84.4	<0.100
FEB										
13...	--	129	110	71	0.10	5.3	396	0.54	119	0.120
APR										
20...	2.1	115	73	9.7	0.30	5.6	236	0.32	632	0.160
MAY										
17...	2.5	115	61	33	0.10	4.5	258	0.35	169	<0.100
JUN										
12...	3.9	122	72	90	0.20	2.0	368	0.50	71.6	<0.100
JUL										
06...	4.1	122	43	94	0.20	1.0	328	0.45	53.1	<0.100
AUG										
17...	3.6	124	53	71	0.20	3.2	315	0.43	55.3	<0.100
SEP										
05...	3.3	119	41	89	0.10	3.0	310	0.42	49.0	<0.100

E Estimated.

09169500 DOLORES RIVER AT BEDROCK, CO--Continued

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	688	600	888	---	---	---	721	430	948	629	1870	618
2	641	598	777	---	---	---	754	433	827	619	1530	592
3	641	608	784	---	---	880	702	433	657	616	2570	580
4	676	627	755	---	---	838	646	424	544	611	1200	574
5	633	594	788	---	---	832	595	416	556	615	1260	576
6	693	601	829	---	---	797	540	414	559	613	1060	569
7	509	607	642	---	---	857	552	414	580	633	955	565
8	592	604	647	---	---	811	552	422	596	628	892	562
9	643	603	662	---	---	760	453	428	611	631	800	555
10	678	602	711	---	---	736	419	420	641	631	765	562
11	658	609	798	---	---	897	413	420	646	606	707	556
12	714	631	---	---	---	901	420	419	648	611	662	559
13	873	577	---	---	---	841	424	416	665	593	637	546
14	758	570	---	---	---	751	411	411	643	575	608	552
15	656	639	---	---	---	553	404	412	696	584	706	608
16	622	1080	---	---	---	529	405	418	719	578	613	666
17	613	794	---	---	---	539	408	463	1260	574	586	691
18	608	778	---	---	---	509	410	544	1850	579	587	688
19	607	1370	---	---	---	496	410	596	1240	581	595	643
20	605	1130	---	---	---	479	407	614	978	582	484	693
21	598	973	---	---	---	483	403	617	837	591	2040	655
22	598	900	---	---	---	501	402	647	756	597	2360	538
23	596	953	---	---	---	573	406	643	719	613	1040	545
24	643	963	---	---	---	672	403	630	684	614	807	1030
25	612	982	---	---	---	670	404	826	655	604	1570	1300
26	675	973	---	---	---	632	401	878	641	545	1290	716
27	599	947	---	---	---	641	396	877	643	639	849	587
28	597	1020	---	---	---	659	418	905	641	1290	774	557
29	604	942	---	---	---	661	423	939	633	737	725	549
30	600	1050	---	---	---	652	432	951	634	759	688	542
31	602	---	---	---	---	695	---	945	---	1980	664	---
MEAN	640	797	---	---	---	---	471	574	757	679	1030	632

09169500 DOLORES RIVER AT BEDROCK, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.4	12.2	12.0	7.7	.3	.0	.1	.0	.1	.0	4.3	.0
2	18.0	12.8	11.9	7.7	.3	.0	.1	.0	.0	.0	3.9	.1
3	19.2	12.9	12.2	7.8	.3	.0	.1	.0	.0	.0	4.7	3.0
4	17.1	13.1	12.2	8.7	.3	.0	.0	.0	.0	.0	5.0	.7
5	16.7	12.4	10.4	5.9	.3	.0	.0	.0	.1	.0	5.3	.0
6	18.4	13.9	9.8	5.6	.3	.0	.0	.0	.1	.0	7.2	1.8
7	17.6	13.7	10.1	6.1	.3	.0	.1	.0	.1	.0	8.7	4.1
8	17.2	12.5	9.3	6.9	.8	.0	.1	.0	.1	.0	11.1	5.9
9	15.2	11.8	10.9	8.1	.5	.0	.1	.0	.0	.0	12.5	7.4
10	17.2	11.3	8.7	6.3	.2	.0	.1	.0	.0	.0	11.7	7.8
11	17.2	11.3	9.5	7.6	.3	.0	.0	.0	.0	.0	11.2	8.2
12	14.8	11.7	8.7	5.5	.3	.0	.1	.0	.0	.0	11.3	8.6
13	17.0	12.2	8.6	5.0	.3	.0	.2	.0	.0	.0	11.3	7.7
14	17.1	12.4	8.6	6.5	.3	.0	.2	.0	.0	.0	9.4	6.9
15	17.3	11.7	7.8	5.3	.5	.0	.2	.0	.0	.0	8.7	5.3
16	16.9	11.0	5.7	3.0	.2	.0	.2	.0	.0	.0	9.6	5.4
17	16.9	11.1	4.3	3.5	.5	.0	.2	.0	.0	.0	9.4	6.9
18	16.9	11.2	4.8	2.5	.3	.0	.2	.0	.0	.0	9.6	6.2
19	16.3	10.9	4.1	1.0	.3	.0	.2	.0	.0	.0	9.6	7.0
20	15.9	10.2	3.8	.5	.5	.0	.1	.0	.0	.0	9.9	6.8
21	15.6	9.7	3.1	.0	.2	.0	.1	.0	.0	.0	10.0	5.9
22	14.6	9.4	3.1	.0	.3	.0	.1	.0	.0	.0	10.8	6.5
23	14.8	9.3	3.5	.0	.3	.0	.1	.0	.2	.0	12.6	8.0
24	14.5	8.9	3.3	2.0	.1	.1	.1	.0	.3	.0	12.8	9.0
25	13.2	8.7	3.6	1.5	.1	.0	.1	.0	3.6	.0	12.4	9.1
26	13.5	8.0	3.7	.5	.1	.0	.2	.0	4.6	.0	10.4	8.9
27	12.9	8.4	2.0	.0	.1	.1	.2	.0	4.5	.0	11.9	7.9
28	13.0	8.1	.3	.0	.1	.0	.1	.0	3.7	.0	13.1	8.0
29	12.6	8.6	.3	.0	.1	.1	.1	.0	---	---	12.3	9.3
30	13.8	9.7	.5	.0	.2	.0	.1	.0	---	---	12.7	8.0
31	13.3	8.3	---	---	.1	.0	.1	.0	---	---	12.8	7.8
MONTH	19.4	8.0	12.2	.0	.8	.0	.2	.0	4.6	.0	13.1	.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.2	9.5	12.6	9.0	22.6	15.7	26.7	19.1	23.0	21.5	22.9	16.3
2	12.9	7.9	14.0	10.6	22.5	16.1	27.1	19.1	24.8	19.9	23.2	16.5
3	13.3	9.2	15.5	12.2	19.5	16.6	27.6	19.7	25.5	19.8	23.4	16.8
4	14.1	9.2	15.4	12.7	21.6	15.7	27.8	20.3	25.3	20.0	20.0	16.2
5	14.0	9.2	16.0	12.0	21.9	16.5	28.3	20.7	24.8	19.3	23.0	16.1
6	14.8	9.8	16.6	12.7	22.0	16.6	28.5	21.4	24.8	19.1	22.4	16.9
7	15.8	10.5	17.2	13.7	23.7	16.7	28.2	21.6	25.7	18.5	21.8	16.9
8	15.5	11.7	18.3	14.0	22.7	18.6	28.5	21.8	25.1	18.8	20.0	16.6
9	14.5	11.9	17.2	14.8	23.5	17.7	28.6	21.4	23.4	20.3	20.7	14.0
10	13.4	9.6	16.8	14.4	21.9	18.7	26.5	21.2	25.3	19.8	19.8	14.5
11	13.1	9.7	16.2	13.9	22.3	16.7	26.6	20.9	24.9	20.2	18.0	14.0
12	12.2	9.8	14.0	12.4	21.7	18.6	26.7	21.5	25.6	20.5	17.8	14.5
13	11.4	8.9	13.5	10.0	24.5	17.3	26.8	20.7	26.1	20.3	19.0	13.4
14	11.3	8.7	13.2	10.7	24.3	18.4	27.5	20.7	24.3	19.3	18.9	11.8
15	12.3	9.3	12.7	10.8	26.6	18.9	27.0	20.8	23.5	19.0	18.8	12.5
16	13.3	9.9	12.9	11.5	26.3	20.7	26.2	19.5	25.4	19.2	17.7	12.5
17	14.0	11.1	16.6	10.2	27.1	19.6	26.5	19.3	23.2	20.2	19.4	14.2
18	13.3	11.1	19.3	12.2	27.2	20.1	27.4	19.5	24.8	18.8	19.7	14.9
19	13.7	11.2	20.7	14.4	24.2	20.6	27.2	20.4	24.0	19.8	19.5	13.2
20	13.0	11.0	21.4	14.6	23.6	19.9	27.7	20.8	20.8	18.0	19.1	14.5
21	13.8	11.3	22.3	16.6	19.6	16.5	29.0	21.7	21.7	16.2	19.3	12.6
22	12.7	11.3	22.7	16.5	21.2	13.4	27.3	22.6	23.0	16.5	19.3	12.8
23	14.0	10.8	20.8	16.7	21.7	16.3	25.9	21.8	22.9	17.8	20.2	13.7
24	13.2	10.9	21.6	15.5	23.0	16.1	25.9	20.9	21.7	16.7	20.7	14.5
25	12.8	10.8	20.8	16.1	23.5	17.5	26.8	21.0	22.0	16.0	20.0	13.8
26	11.9	10.3	21.9	15.2	24.9	17.5	26.7	21.3	22.1	15.6	18.8	14.0
27	11.7	9.5	20.5	15.8	24.7	18.8	25.3	21.5	22.5	15.7	19.2	14.2
28	10.8	9.0	21.9	15.8	25.0	19.4	24.3	21.1	22.8	15.8	20.6	14.0
29	11.0	8.1	21.2	15.5	25.0	19.0	24.3	20.1	23.1	16.2	19.9	14.1
30	11.8	8.8	19.8	14.3	25.9	19.2	26.1	19.9	22.4	17.1	18.2	13.4
31	---	---	21.6	13.7	---	---	26.8	20.7	23.6	16.7	---	---
MONTH	15.8	7.9	22.7	9.0	27.2	13.4	29.0	19.1	26.1	15.6	23.4	11.8
YEAR	29.0	.0										

09170800 WEST PARADOX CREEK ABOVE PARADOX, CO

WATER-QUALITY RECORDS

LOCATION.-- Latitude 38°19'54", longitude 108°53'59", in NE¼NW¼ sec.18, T.47 N, R.18 W, Montrose County. Site is 1000 ft downstream from former surface water station and 1.3 mi northwest of Bedrock, 2.6 mi upstream from mouth.

DRAINAGE AREA.-- 53.3 mi²

PERIOD OF RECORD.--Chemical analyses: August 1987 to current year.

REMARKS.--Natural flow affected by water imported from Rock Creek through Buckeye Reservoir. Diversion for irrigation of about 2,500 acres.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
OCT 06...	1300	1240	7.3	13.0	630	430	130	74	35	0.6
NOV 22...	1100	1210	8.0	2.0	620	380	120	78	37	0.7
DEC 09...	0935	1270	8.4	0.5	630	380	120	80	38	0.7
JAN 04...	1430	--	8.1	0.0	560	320	110	70	36	0.7
FEB 13...	1145	1180	8.5	0.0	610	380	120	75	34	0.6

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
OCT 06...	7.2	198	420	36	0.30	9.0	834	1.13	0.0	0.82
NOV 22...	3.3	242	420	29	0.30	11	847	1.15	0.0	0.86
DEC 09...	3.3	247	440	29	0.30	13	875	1.19	0.0	0.79
JAN 04...	3.2	239	400	26	0.30	13	806	1.10	0.0	0.88
FEB 13...	2.9	230	420	27	0.30	12	832	1.13	0.0	0.74

09171100 DOLORES RIVER NEAR BEDROCK, CO

LOCATION.--Lat 38°21'29", long 108°49'54", in SW¼NW¼ sec.2, T.47 N., R.18 W., Montrose County, Hydrologic Unit 14030002, on right bank 2.5 mi downstream from West Paradox Creek and 4.3 mi northeast of Bedrock.

DRAINAGE AREA.--2,145 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1971 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,910 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Feb. 1, 1972, at site 400 ft upstream at datum 1.02 ft, higher.

REMARKS.--Estimated daily discharges: Dec. 7, 8, 11-16, 18-21, 26-29, Jan. 1-8, 11-14, and Feb. 2-6. Records good except for estimated daily discharges, which are fair. Diversions upstream from station for irrigation of about 80,000 acres, of which about 74,760 acres are in the San Juan River basin. Flow regulated by McPhee Reservoir, capacity 381,000 acre-ft, since Mar. 19, 1984 .

AVERAGE DISCHARGE.--12 years (water years 1972-83), 502 ft^3/s; 363,700 acre-ft/yr, prior to completion of McPhee Dam; 6 years (water years 1984-89), 491 ft^3/s; 355,700 acre-ft/yr, subsequent to completion of McPhee Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,500 ft^3/s, Apr. 30, 1973, gage height, 12.88 ft, from floodmarks; minimum daily, 0.12 ft^3/s, July 17, 18, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 6, 1970, reached a stage of 11.25 ft, site and datum in use prior to Feb. 1, 1972 (discharge, 5,710 ft^3/s), by slope-area measurement at site 1,400 ft upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,010 ft^3/s at 0100 Apr. 19, gage height, 6.11 ft; minimum daily, 28 ft^3/s, Sept. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	99	89	75	95	161	221	629	79	60	88	58
2	78	100	92	85	95	147	258	626	167	57	77	59
3	78	101	94	90	90	157	323	618	178	56	98	59
4	77	99	93	95	85	160	314	609	176	56	84	58
5	82	99	90	95	80	145	494	601	131	56	72	60
6	86	99	90	95	80	127	510	601	124	59	74	60
7	130	100	90	90	76	123	490	601	121	58	67	59
8	73	102	90	85	76	126	521	605	120	58	65	58
9	70	102	85	83	81	139	689	612	89	58	63	57
10	70	100	82	73	90	200	751	617	76	59	63	57
11	87	120	85	75	102	262	904	619	75	60	64	56
12	89	126	85	80	112	366	993	619	75	62	70	58
13	91	136	85	80	108	423	988	622	80	66	64	59
14	92	122	85	80	108	439	992	623	101	68	62	55
15	92	119	85	79	104	593	988	618	88	64	65	37
16	92	155	85	80	104	460	978	496	80	61	64	29
17	93	149	83	83	106	433	977	256	76	61	61	28
18	93	122	85	85	111	555	982	226	72	58	67	39
19	94	113	85	81	119	482	1010	203	71	58	111	54
20	93	111	85	82	138	516	1000	155	69	59	116	63
21	91	108	85	85	132	512	995	146	66	59	94	61
22	93	101	85	88	120	367	995	142	67	58	85	83
23	94	98	86	90	120	293	998	139	67	61	89	66
24	95	98	64	92	131	332	993	134	68	63	69	64
25	95	100	62	94	150	371	989	119	65	66	64	63
26	96	101	60	98	165	357	988	96	60	102	62	62
27	97	98	60	98	182	328	874	93	59	140	61	63
28	98	82	65	99	185	335	654	90	59	134	55	63
29	97	83	65	95	---	302	644	85	60	165	54	61
30	98	74	63	93	---	267	636	80	59	192	54	61
31	98	---	66	93	---	251	---	78	---	144	54	---
TOTAL	2788	3217	2504	2696	3145	9729	23149	11758	2678	2378	2236	1710
MEAN	89.9	107	80.8	87.0	112	314	772	379	89.3	76.7	72.1	57.0
MAX	130	155	94	99	185	593	1010	629	178	192	116	83
MIN	70	74	60	73	76	123	221	78	59	56	54	28
AC-FT	5530	6380	4970	5350	6240	19300	45920	23320	5310	4720	4440	3390

CAL YR 1988 TOTAL 74735 MEAN 204 MAX 1360 MIN 60 AC-FT 148200
WTR YR 1989 TOTAL 67988 MEAN 186 MAX 1010 MIN 28 AC-FT 134900

09171100 DOLORES RIVER NEAR BEDROCK, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Data collected 1.2 miles upstream from current site at station 09171070 from January 1979 to Dec. 2, 1987. Data between sites are not equivalent. At current site Dec. 2, 1987 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Dec. 2, 1987 to current year.
WATER TEMPERATURE: Dec. 2, 1987 to current year.

INSTRUMENTATION.--Water-quality monitor since Dec. 2, 1987.

REMARKS.--Daily maximum and minimum specific-conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 14,300 microsiemens Nov. 30, 1988; minimum, 350 microsiemens May 9 and 10 1988.
WATER TEMPERATURES: Maximum, 32.7°C July 13, 1988; minimum, 0.0°C many days during winters.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum 14,300 microsiemens Nov. 30; minimum 433 microsiemens April 17.
WATER TEMPERATURES: Maximum, 32.1°C July 6,8; minimum, 0.0°C many days during December, January, and February.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO
OCT 06...	1720	85	4840	--	17.5	300	170	67	33	870	22
NOV 22...	1630	112	5080	8.0	4.0	380	240	80	43	950	22
DEC 09...	1130	65	8310	7.9	0.0	480	330	96	58	1800	37
JAN 04...	1220	94	4720	7.8	0.0	360	240	80	39	830	20
FEB 13...	1400	112	4500	7.8	4.5	340	200	73	38	730	18
APR 19...	1445	985	485	8.1	14.5	170	54	47	13	32	1
MAY 17...	1630	246	1550	8.3	16.5	190	72	50	16	220	7
JUN 12...	1430	74	5100	8.4	22.5	290	160	65	32	870	23
JUL 07...	0830	57	3920	8.3	19.5	240	120	56	25	610	18
AUG 17...	1030	62	2250	8.2	21.0	200	80	52	18	380	12
SEP 05...	1400	62	2240	8.6	24.5	190	70	48	17	360	12

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
OCT 06...	25	129	150	1400	0.20	3.8	2630	3.57	606	0.11
NOV 22...	42	138	260	1500	0.20	5.1	2960	4.03	896	0.10
DEC 09...	73	152	260	2800	0.10	5.6	5180	7.05	910	<0.10
JAN 04...	38	164	160	1400	0.20	6.8	2620	3.57	666	<0.10
FEB 13...	30	144	190	1200	0.20	6.0	2350	3.20	712	0.19
APR 19...	3.0	117	76	28	0.20	5.0	274	0.37	730	<0.10
MAY 17...	11	119	85	360	0.10	4.5	818	1.11	543	<0.10
JUN 12...	41	131	150	1400	0.20	1.8	2640	3.59	529	<0.10
JUL 07...	36	124	99	1100	0.20	1.3	2000	2.72	310	<0.10
AUG 17...	17	124	83	590	0.20	4.0	1220	1.66	204	<0.10
SEP 05...	20	120	68	540	0.10	3.0	1130	1.53	189	<0.10

09171100 DOLORES RIVER NEAR BEDROCK, CO--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C) WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5320	6490	7030	7590	5870	3450	2010	548	5890	5050	2150	2520
2	5280	6590	6800	6130	5410	3770	2140	558	3200	5050	2260	2410
3	5370	6860	6750	4790	4510	3890	1890	562	2120	4890	2410	2320
4	5410	6800	6540	4630	4300	3460	1520	557	1890	4720	2490	2250
5	5360	6750	6800	4850	4100	3380	771	558	2410	4520	2370	2270
6	4580	6950	7330	4510	4800	3610	788	556	2650	4120	2360	2410
7	2940	6830	5350	4210	6240	3760	755	558	2720	3890	2300	2570
8	6800	6770	4960	4820	6710	3590	696	568	2730	3890	2300	2780
9	7650	6580	5840	6220	6390	3190	615	568	3550	3750	2310	2660
10	7760	6620	6540	7470	5780	2250	498	558	4670	3420	2320	2550
11	5670	5860	6550	7090	5090	1890	462	551	4840	3590	2260	2490
12	5430	4700	6010	5470	4620	1700	510	521	4810	3270	2140	2270
13	5730	4270	5860	6210	4590	1400	552	528	4420	2630	2100	2180
14	5930	4940	5480	6060	4560	1160	567	527	3400	2510	2170	2460
15	5880	5490	4150	6800	5030	1290	519	542	3790	2720	2220	4390
16	6320	4320	4530	6370	5570	1240	470	683	4530	2810	2220	5680
17	6460	3550	5320	6130	6110	1290	449	1340	4930	2860	2130	6040
18	6460	4870	5870	5880	6540	1270	459	1660	5890	2940	1860	4650
19	6580	5740	5080	6390	6380	1250	473	2160	5830	2980	1760	2360
20	6570	5930	4310	6130	5020	1280	480	3090	5500	2930	1200	2400
21	6630	5730	4870	5990	4690	1260	477	3410	5290	2900	1600	2190
22	6570	5860	5410	5940	5270	1350	480	3620	5140	2910	2690	1510
23	6370	6230	5620	5910	5650	1590	479	3790	4920	2780	2860	1820
24	6380	6390	6960	6170	4770	1630	475	3900	4580	2700	2700	2030
25	6380	6460	8370	5720	4170	1580	470	4250	4670	2420	2620	2720
26	6400	6400	4870	5500	3510	1580	466	5400	5280	1830	2740	2370
27	6420	6230	7160	5690	3080	1630	465	5500	5350	1570	2710	2140
28	6320	8150	7180	5880	3300	1640	539	5470	4870	1640	2680	2050
29	6340	7620	7140	6150	---	1680	553	5760	5360	2190	2720	2060
30	6500	9390	8240	5890	---	1750	557	6050	5280	2110	2740	2120
31	6410	---	9070	5700	---	1810	---	6040	---	2120	2700	---
MEAN	6070	6180	6190	5880	5070	2120	719	2270	4350	3150	2330	2690

09171100 DOLORES RIVER NEAR BEDROCK, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.9	11.1	11.6	7.1	3.2	.0	.0	.0	2.1	.0	5.7	.0
2	18.3	11.4	11.7	6.7	3.2	.0	.0	.0	3.2	.0	3.4	.0
3	18.0	11.0	12.3	7.2	3.2	.0	.0	.0	.5	.0	5.6	2.2
4	16.1	11.7	11.8	8.1	3.3	.0	.0	.0	1.4	.0	6.3	.0
5	17.5	11.4	11.0	6.0	2.5	.0	.0	.0	.3	.0	7.2	.0
6	20.1	14.9	9.9	5.5	1.8	.0	.0	.0	1.0	.0	9.2	1.5
7	17.3	13.3	10.0	5.4	2.9	.0	.0	.0	.9	.0	10.3	3.3
8	16.8	10.3	9.5	6.5	3.2	.0	.0	.0	1.8	.0	13.5	5.2
9	16.0	10.5	11.2	7.5	1.7	.0	.0	.0	2.0	.0	14.9	6.1
10	17.6	9.7	8.9	6.4	1.7	.0	.1	.0	2.0	.0	12.3	6.8
11	17.2	10.3	9.0	7.3	2.4	.0	.0	.0	3.5	.0	12.0	7.1
12	14.0	10.5	9.3	5.0	1.9	.0	.0	.0	3.8	.0	12.0	8.2
13	16.2	10.5	9.3	4.9	2.1	.0	.0	.0	4.4	.0	11.9	7.3
14	16.2	10.9	8.2	6.2	1.1	.0	.0	.0	3.9	.0	10.4	6.4
15	16.2	9.7	8.1	5.7	2.6	.0	.1	.0	4.2	.0	9.4	5.2
16	15.8	9.2	6.4	3.2	1.6	.0	.0	.0	4.7	.0	10.3	5.2
17	15.1	8.7	5.2	3.8	1.3	.0	.1	.0	5.3	.0	9.8	6.5
18	15.1	9.1	5.9	3.1	1.5	.0	.0	.0	5.3	.0	10.2	5.9
19	14.8	9.0	5.3	1.7	2.0	.0	.2	.0	3.0	.0	9.7	6.8
20	14.4	8.3	4.9	1.3	2.5	.0	.1	.0	3.7	.0	10.6	6.6
21	14.0	7.9	4.3	1.0	.9	.0	.0	.0	5.6	.0	10.7	5.5
22	13.5	7.9	4.1	1.0	1.0	.0	.2	.0	5.8	.0	11.6	6.1
23	14.0	7.8	4.7	.0	2.5	.0	.4	.0	6.2	.0	13.4	7.9
24	14.0	7.8	3.9	2.3	.0	.0	.0	.0	6.7	.0	13.7	8.0
25	13.0	7.9	4.7	1.6	.0	.0	.9	.0	5.9	.0	13.4	8.1
26	13.4	7.0	4.4	1.0	.0	.0	.9	.0	7.1	.0	10.6	8.9
27	12.9	7.7	3.3	.0	.0	.0	.9	.0	6.3	.0	12.9	7.4
28	12.8	7.6	2.4	.0	.0	.0	1.5	.0	5.2	.0	13.9	7.3
29	12.0	8.0	2.7	.0	.0	.0	1.8	.0	---	---	11.9	8.9
30	13.9	8.6	2.4	.0	.0	.0	2.0	.0	---	---	14.2	7.3
31	12.9	7.7	---	---	.0	.0	2.2	.0	---	---	14.0	7.3
MONTH	20.1	7.0	12.3	.0	3.3	.0	2.2	.0	7.1	.0	14.9	.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.9	9.4	13.3	8.7	24.4	13.5	28.7	16.4	23.9	22.0	26.9	16.4
2	12.2	7.1	14.8	10.5	23.3	15.2	30.2	16.0	25.5	20.3	26.9	16.7
3	14.5	9.2	15.8	12.0	19.4	15.6	30.7	16.4	26.4	20.0	25.7	17.1
4	14.3	8.4	16.9	12.6	21.7	14.9	30.5	17.2	26.4	19.7	23.2	16.4
5	13.9	8.9	16.9	11.1	23.8	15.8	31.8	17.7	28.0	18.5	25.7	16.9
6	14.4	10.0	17.8	12.3	23.2	15.1	32.1	18.6	26.5	18.4	24.2	16.0
7	16.3	10.2	18.2	13.4	25.8	15.1	31.7	19.7	27.4	17.8	23.8	16.5
8	16.7	11.1	19.0	13.9	25.2	17.5	32.1	19.8	27.8	18.1	21.7	16.3
9	15.5	11.5	18.0	14.5	25.5	16.1	31.7	19.8	24.4	19.8	24.3	13.3
10	14.0	9.9	17.6	14.4	22.5	17.0	29.6	20.8	26.8	19.6	22.8	13.7
11	13.6	9.6	17.9	13.7	27.1	15.2	30.1	19.8	26.5	20.4	20.1	12.9
12	13.1	9.3	13.7	11.9	22.9	16.9	29.6	20.8	28.4	20.4	20.4	14.3
13	12.5	8.3	14.9	10.2	26.5	15.7	30.6	20.1	28.8	19.5	21.8	12.4
14	12.6	8.0	14.2	10.7	26.2	17.0	29.5	19.4	26.5	18.5	22.8	10.6
15	13.2	8.7	13.3	11.0	29.7	17.3	29.1	19.4	27.0	18.7	23.2	10.5
16	14.4	9.5	13.6	11.1	27.1	18.9	27.7	18.1	29.3	18.6	21.3	10.4
17	14.6	10.6	17.0	9.8	29.7	18.1	29.3	17.7	25.3	19.5	21.8	13.3
18	14.9	10.7	20.1	12.0	29.7	18.2	30.4	17.9	27.8	18.9	21.9	14.9
19	15.0	10.7	21.4	13.6	26.3	18.3	30.5	18.8	27.7	20.0	22.1	12.0
20	14.1	10.8	22.4	14.0	24.6	19.1	30.5	19.2	21.8	19.0	21.7	14.4
21	14.9	10.8	22.9	15.9	20.3	14.4	31.1	20.1	25.3	17.2	22.3	12.2
22	13.8	10.9	24.1	15.0	24.6	11.6	30.2	21.9	27.4	17.1	22.6	12.6
23	14.9	10.2	21.9	15.0	21.4	14.3	29.5	21.7	25.5	18.5	23.1	13.1
24	13.8	10.5	22.6	14.4	24.7	14.4	29.2	20.9	24.3	17.4	23.7	13.7
25	13.9	10.3	22.6	14.6	25.7	15.4	30.0	20.6	24.8	16.6	22.7	12.9
26	12.8	9.7	24.3	12.8	27.8	15.4	29.1	21.2	25.6	16.4	21.2	13.3
27	11.3	8.9	21.9	13.7	27.2	16.0	29.0	21.2	25.5	16.5	22.0	13.5
28	11.1	8.9	22.3	13.7	26.8	17.6	28.0	20.8	27.5	16.3	23.6	13.2
29	11.0	7.9	22.2	14.0	27.5	17.3	25.6	20.6	27.5	16.2	22.3	13.2
30	13.3	8.1	20.7	12.9	28.0	16.9	26.6	20.9	26.3	17.4	20.3	12.7
31	---	---	23.6	11.7	---	---	27.8	21.8	27.4	17.0	---	---
MONTH	16.7	7.1	24.3	8.7	29.7	11.6	32.1	16.0	29.3	16.2	26.9	10.4
YEAR	32.1	.0										

09172500 SAN MIGUEL RIVER NEAR PLACERVILLE, CO

LOCATION.--Lat 38°02'33", long 108°07'54", in NW¼NE¼ sec.25, T.44 N., R.12 W., San Miguel County, Hydrologic Unit 14030003, on right bank 1.5 mi downstream from Specie Creek in vicinity of mile marker 88.68 on State Highway 145 and 4.5 mi northwest of Placerville, CO.

DRAINAGE AREA.--310 mi^2.

PERIOD OF RECORD.--January to December 1909, September 1910 to December 1912, April 1930 to September 1934, April 1942 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "at Placerville," 1910-12.

GAGE.--Water-stage recorder. Elevation of gage is 7,030 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1713 or 1733 for history of changes prior to Oct. 21, 1958. Oct. 22, 1958 to Mar. 4, 1986, gage located 0.8 mi upstream from present site, at different datum. Mar. 5, 1986, gage moved to present site, at present datum.

REMARKS.--Estimated daily discharges: Nov. 19 to Feb. 25, Mar. 13-22 and June 16-21. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 1,700 acres upstream from station. One diversion from Fall Creek for irrigation of about 2,000 acres in Beaver and Saltado Creek basins. One small ditch diverts water from Leopard Creek to Uncompahgre River basin. Slight regulation by Lake Hope and Trout Lake operated by Colorado Ute Electric Association, combined capacity, 5,040 acre-ft. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--53 years (water years 1911-12, 1931-34, 1943-89), 237 ft^3/s; 171,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,000 ft^3/s, Sept. 5, 1909 (result of failure of Trout and Middle Reservoir Dams); minimum daily, 26 ft^3/s, Jan. 5, 1960.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 8	1100	--	a*4.59	May 29	0200	*739	3.71

a Backwater from ice
Minimum daily discharge, 36 ft^3/s, Feb. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126	77	65	50	46	73	151	205	481	274	303	94
2	120	77	70	46	46	72	141	195	471	281	269	80
3	115	76	70	44	46	75	144	188	414	280	222	77
4	116	75	70	50	46	83	151	181	393	268	210	76
5	110	70	70	55	44	75	148	182	359	261	187	77
6	108	70	70	50	38	78	185	202	429	264	167	94
7	114	71	70	48	36	83	242	241	406	238	152	91
8	109	72	65	46	38	87	275	282	433	227	138	92
9	111	80	65	46	38	89	268	364	419	225	135	87
10	110	74	60	44	38	121	242	424	388	203	140	82
11	105	80	65	44	42	126	234	421	369	216	142	78
12	102	73	65	44	42	113	236	367	413	249	155	68
13	107	75	65	42	42	100	210	319	366	231	155	77
14	101	77	65	42	42	140	208	306	366	204	137	69
15	100	86	60	42	42	110	224	279	405	198	129	66
16	97	67	60	40	42	120	242	248	480	177	117	63
17	97	77	60	42	42	120	264	242	520	168	118	62
18	90	83	60	42	44	110	274	237	530	161	204	64
19	92	75	60	44	44	120	296	267	540	156	186	63
20	92	70	55	44	44	110	298	345	500	153	162	73
21	94	70	55	44	44	100	328	425	450	148	177	69
22	85	75	55	46	44	95	358	501	343	153	162	63
23	83	75	60	46	46	116	334	581	299	190	144	63
24	81	80	55	48	50	169	338	588	312	388	133	62
25	79	80	55	50	60	193	313	554	322	253	128	61
26	83	75	50	48	70	183	303	470	306	213	122	60
27	77	70	50	48	68	161	272	505	298	229	121	60
28	78	70	50	48	73	150	244	588	310	208	116	60
29	77	65	50	46	---	170	228	660	312	284	105	57
30	80	65	50	48	---	141	215	601	292	284	103	57
31	78	---	50	48	---	127	---	514	---	227	95	---
TOTAL	3017	2230	1870	1425	1297	3610	7366	11482	11926	7011	4834	2145
MEAN	97.3	74.3	60.3	46.0	46.3	116	246	370	398	226	156	71.5
MAX	126	86	70	55	73	193	358	660	540	388	303	94
MIN	77	65	50	40	36	72	141	181	292	148	95	57
AC-FT	5980	4420	3710	2830	2570	7160	14610	22770	23660	13910	9590	4250

CAL YR 1988 TOTAL 67310 MEAN 184 MAX 876 MIN 48 AC-FT 133500
WTR YR 1989 TOTAL 58213 MEAN 159 MAX 660 MIN 36 AC-FT 115500

09177000 SAN MIGUEL RIVER AT URAVAN, CO

LOCATION.--Lat 38°21'26", long 108°42'44", in SW¼NE¼ sec.2, T.47 N., R.17 W., Montrose County, Hydrologic Unit 14030003, on right bank 20 ft downstream from bridge on State Highway 141, 400 ft downstream from Tabeguache Creek, and 1.5 mi southeast of Uravan.

DRAINAGE AREA.--1,499 mi².

PERIOD OF RECORD.--August 1954 to September 1962, October 1973 to current year.

REVISED RECORDS.--WRD Colo. 1974: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,000 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 3, 1959, at site 0.5 mi downstream at different datum.

REMARKS.--Estimated daily discharges: Nov. 19 to Feb. 27. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, diversions for irrigation of about 28,000 acres upstream from station, and return flow from irrigated areas. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--24 years (water years 1955-62, 1974-89), 394 ft³/s; 285,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,050 ft³/s, May 10, 1983, gage height, 10.14 ft, from rating curve extended above 4,100 ft³/s; minimum daily, 9.4 ft³/s, Aug. 10, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 6, 1970, reached a stage of 12.6 ft, from floodmarks, discharge, 8,910 ft³/s, by slope-area measurement at site 5.5 mi downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
July 29	2300	*1,140	*5.35				

Minimum daily, 21 ft³/s, Sept. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	100	75	70	75	124	414	247	436	188	186	41
2	102	100	80	70	75	126	385	223	379	190	234	36
3	100	100	80	70	70	124	362	210	358	185	188	33
4	137	100	80	75	70	118	393	198	338	173	151	33
5	132	99	80	75	70	108	355	197	321	170	140	31
6	144	97	80	70	70	103	397	197	330	163	116	27
7	146	99	80	70	70	111	531	217	342	146	95	25
8	146	100	80	65	70	126	690	260	338	127	79	30
9	136	104	75	60	75	146	709	311	338	133	61	31
10	136	113	75	55	80	162	638	367	321	110	63	34
11	134	122	75	60	90	250	560	419	306	114	89	33
12	128	134	75	60	100	369	534	391	304	179	90	30
13	126	113	75	60	100	360	476	339	338	138	83	28
14	128	113	75	60	95	502	446	315	298	112	85	28
15	124	136	75	60	90	378	455	309	294	103	83	27
16	120	115	70	60	85	374	499	280	364	81	81	26
17	118	81	70	60	85	418	516	271	447	68	66	25
18	120	76	70	60	85	383	495	240	464	59	104	23
19	115	70	70	60	90	419	487	230	463	51	179	21
20	116	70	70	65	100	435	485	269	402	47	151	41
21	118	70	70	65	100	352	500	329	378	47	145	33
22	118	70	70	70	95	338	539	397	339	47	145	32
23	109	70	70	70	90	358	506	449	235	56	121	29
24	107	75	70	70	100	458	476	494	228	138	99	27
25	106	75	70	70	110	509	451	485	232	264	89	28
26	104	75	70	70	120	586	405	426	225	182	83	27
27	106	75	65	70	120	497	367	415	213	158	74	28
28	102	75	65	70	127	446	328	484	215	182	66	26
29	100	75	65	70	---	515	298	650	220	245	59	25
30	102	75	65	70	---	442	276	581	205	325	47	24
31	104	---	65	75	---	363	---	492	---	219	45	---
TOTAL	3693	2777	2255	2055	2507	10005	13973	10692	9671	4400	3297	882
MEAN	119	92.6	72.7	66.3	89.5	323	466	345	322	142	106	29.4
MAX	146	136	80	75	127	586	709	650	464	325	234	41
MIN	100	70	65	55	70	103	276	197	205	47	45	21
AC-FT	7330	5510	4470	4080	4970	19840	27720	21210	19180	8730	6540	1750

CAL YR 1988 TOTAL 89345 MEAN 244 MAX 872 MIN 65 AC-FT 177200
WTR YR 1989 TOTAL 66207 MEAN 181 MAX 709 MIN 21 AC-FT 131300

09237450 YAMPA RIVER ABOVE STAGECOACH RESERVOIR, CO

LOCATION.--Lat 40°16'09", long 106°52'49", in SW¼SW¼ sec. 36, T. 4 N., R. 85 W., Routt County, Hydrologic Unit 14050001, on left bank, 1.4 mi downstream from Jack Creek and 4.0 mi east of Oak Creek, Co.

DRAINAGE AREA.--257 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1988 to September 1989.

GAGE.--Water-stage recorder. Elevation of gage is 7,240 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 13 to Mar. 18. Records good except for estimated daily discharges, and period of poor gage-height record, Oct. 1 to May 4, which are poor. Diversions for irrigation of about 12,000 acres upstream from station. Natural flow of stream affected by 2 diversions for irrigation to Egeria Creek into Colorado River basin and by storage in Stillwater, Yampa and YamColo Reservoirs (total capacity, 15,820 acre-ft).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 274 ft^3/s at 0200 Apr. 8, gage height, 3.57 ft; minimum daily, 29 ft^3/s, Sept. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	41	47	38	37	38	107	78	59	76	104	46
2	50	41	48	39	37	38	95	74	62	73	124	41
3	50	45	47	41	37	39	98	73	68	74	115	38
4	52	55	49	40	38	38	79	84	69	74	97	34
5	58	46	48	40	37	38	82	82	82	67	94	36
6	57	44	48	39	38	38	121	72	78	63	87	37
7	52	43	48	38	38	40	172	68	81	62	85	34
8	51	44	47	39	38	41	232	66	83	70	80	39
9	52	50	47	38	37	42	211	67	95	74	78	46
10	50	52	47	37	37	43	166	62	95	74	81	43
11	54	53	46	37	37	44	161	66	93	86	80	42
12	53	53	46	38	37	45	150	67	93	93	93	61
13	52	53	46	37	37	50	146	67	96	113	97	63
14	51	52	46	37	36	60	151	65	89	93	83	54
15	50	54	45	37	37	70	156	70	85	82	80	49
16	51	50	45	37	38	80	161	68	78	74	78	45
17	51	52	45	37	38	90	165	74	84	66	80	45
18	42	48	46	38	33	100	175	65	81	60	80	41
19	49	52	45	38	39	111	161	60	77	59	75	41
20	48	54	44	37	40	92	156	70	75	64	76	47
21	43	45	44	37	40	79	155	73	78	69	74	40
22	42	43	44	37	40	82	145	69	86	70	71	35
23	43	46	43	38	37	97	138	68	90	82	70	33
24	41	44	42	39	42	121	134	72	86	118	63	33
25	42	48	42	38	40	160	105	69	85	94	57	35
26	43	50	41	37	38	168	98	63	86	102	59	32
27	45	47	41	37	38	154	94	60	84	94	59	29
28	37	43	40	38	38	139	90	59	80	94	49	31
29	37	47	40	37	---	140	85	61	84	104	47	31
30	43	48	39	38	---	103	83	67	84	129	48	33
31	41	---	39	38	---	91	---	62	---	107	49	---
TOTAL	1487	1443	1385	1176	1064	2471	4072	2121	2466	2560	2413	1214
MEAN	48.0	48.1	44.7	37.9	38.0	79.7	136	68.4	82.2	82.6	77.8	40.5
MAX	58	55	49	41	42	168	232	84	96	129	124	63
MIN	37	41	39	37	36	38	79	59	59	59	47	29
AC-FT	2950	2860	2750	2330	2110	4900	8080	4210	4890	5080	4790	2410

WTR YR 1989 TOTAL 23872 MEAN 65.4 MAX 232 MIN 29 AC-FT 47350

09237450 YAMPA RIVER ABOVE STAGECOACH RESERVOIR, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1984 to current year.

REMARKS.--Prior to this year, data for this station were published under Yampa River above Dam Site near Oak Creek (station number 401609106525201).

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	OXYGEN DEMAND, BIOCHEM 20 DAY, 20 DEG (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV 17...	1420	52	405	8.5	0.0	--	10.8	--	--	--	--
JAN 10...	1700	37	374	8.0	0.0	4.7	10.8	0.5	2.2	36	140
MAR 21...	1510	80	536	8.4	5.5	12	9.7	2.9	5.7	K4	76
APR 26...	1400	97	440	8.7	11.0	17	9.4	1.8	4.1	K17	K9
MAY 16...	1415	69	559	8.5	11.0	5.2	9.0	1.3	3.4	200	37
JUN 14...	1255	90	547	8.5	14.0	9.0	9.1	1.6	4.8	190	230
JUL 26...	1450	107	523	8.3	17.5	26	7.6	1.8	5.1	K530	410
AUG 22...	1335	71	470	8.6	15.5	6.7	8.8	1.1	2.5	40	34

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
NOV 17...	54	<0.01	<0.1	<0.1	0.02	0.40	<0.2	0.12	0.02	<0.01
JAN 10...	6	<0.01	0.20	0.19	0.07	0.60	0.40	0.05	0.03	0.01
MAR 21...	101	<0.01	<0.1	<0.1	0.03	0.80	0.30	0.20	0.04	0.03
APR 26...	28	<0.01	<0.1	<0.1	0.02	0.60	0.40	0.05	0.01	0.01
MAY 16...	7	<0.01	<0.1	<0.1	0.01	0.50	0.40	0.04	<0.01	<0.01
JUN 14...	12	<0.01	<0.1	<0.1	0.01	0.50	0.40	0.06	0.03	0.03
JUL 26...	66	<0.01	<0.1	<0.1	0.02	1.0	0.40	0.15	0.04	0.03
AUG 22...	21	<0.01	<0.1	<0.1	0.01	0.30	<0.2	0.07	0.02	0.02

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)
NOV 17...	210	52	20	11	0.3	1.9	164
APR 26...	220	54	20	12	0.4	2.0	169

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)
NOV 17...	58	2.4	0.2	19	263	0.36	36.9
APR 26...	69	2.4	0.2	14	275	0.37	72.0

K BASED ON NON-IDEAL COLONY COUNT.

09237450 YAMPA RIVER ABOVE STAGECOACH RESERVOIR, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ANTIMONY, TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)
NOV 17...	820	<1	1	100	<10	<1	2	<1	6	1600
APR 26...	520	<1	1	100	<10	<1	2	<1	2	1100

DATE	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LITHIUM TOTAL RECOVERABLE (UG/L AS LI)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
NOV 17...	<5	20	90	<0.1	<1	5	<1	<1	300	<10
APR 26...	<5	20	100	<0.1	4	2	<1	<1	280	10

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 04...	1430	50	--	10.0
NOV 09...	1000	47	425	2.0
DEC 13...	1030	46	387	0.5
JAN 03...	1010	41	344	0.5
FEB 14...	1100	36	388	0.5
MAR 21...	1205	55	549	5.0
23...	1230	92	556	8.5
MAY 10...	1245	64	512	15.0
30...	1125	76	489	14.5
AUG 03...	1100	112	516	19.0
30...	1245	50	445	15.0

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 04...	1430	50	135	18	35
NOV 09...	1000	47	144	18	27
17...	1420	52	75	11	74
DEC 13...	1030	46	119	15	30
JAN 10...	1700	37	16	1.6	--
MAR 21...	1510	80	95	21	73
23...	1230	92	50	12	70
APR 26...	1400	97	45	12	88
MAY 16...	1415	69	22	4.1	63
JUN 14...	1255	90	52	13	53
JUL 03...	1420	80	75	16	46
19...	1445	65	34	6.0	68
26...	1450	107	138	40	71
AUG 03...	1100	112	49	15	76
22...	1335	71	33	6.3	62
30...	1245	50	24	3.2	65

09237500 YAMPA RIVER NEAR OAK CREEK, CO.

LOCATION.--Lat 40°17'15", long 106°49'33", in SE¼NE¼ sec. 29, T. 4 N., R. 84 W., Routt County, Hydrologic Unit 1405001, on left bank, 1.0 mi upstream from Morrison Creek and 6.5 mi east of Oak Creek, Co.

DRAINAGE AREA.--278 mi^2 (revised).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1939 to September 1944 (monthly discharge only for some periods, published in WSP 1313), October 1956 to September 1972, October 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,050 ft above National Geodetic Vertical Datum of 1929, from topographic map. Sept. 1939 to Nov. 15, 1939, nonrecording gage, Nov. 16 1939, to Sept 1944 and Oct. 1956 to Sept 1972, water-stage recorder at site 0.5 mi upstream, at different datum.

REMARKS.--Estimated daily discharges: Nov. 13 to Dec. 22, 25-26, Jan. 3, 6-25, 30 to Feb. 2, 5-6. Records good except for estimated daily discharges, which are poor. Flow regulated since Dec. 20 1988, by Stagecoach Reservoir (capacity 33,275 acre-ft), 0.3 mi upstream. Diversions for irrigation of about 12,000 acres upstream from station. Natural flow of stream affected by 2 diversions for irrigation to Egeria Creek into Colorado River basin and by storage in Stillwater, Yampa and YamColo Reservoirs (total capacity, 15,820 acre-ft).

AVERAGE DISCHARGE.--25 years (water years 1940-44, 1957-72, 1985-88), 89.4 ft^3/s; 64,770 acre-ft/yr, prior to completion of Stagecoach Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,400 ft^3/s, Apr. 16, 1962, gage height, 7.56 ft, from rating curve extended above 570 ft^3/s, site and datum then in use; maximum gage height, 8.08 ft, Mar. 8, 1987, (backwater from ice); minimum daily discharge, 8.9 ft^3/s, May 22, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 129 ft^3/s at 1630 Sept. 5, gage height, 2.40 ft; minimum daily, 9.4 ft^3/s, June 1-3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	49	46	46	36	17	18	15	9.4	12	33	61
2	49	46	46	48	36	17	18	17	9.4	12	33	57
3	49	49	46	20	39	17	18	17	9.4	12	27	62
4	51	61	46	38	44	18	18	17	10	12	25	61
5	56	51	46	32	43	37	18	17	11	11	25	69
6	56	48	46	30	42	17	16	15	11	12	25	68
7	52	47	46	30	41	17	19	13	12	14	30	67
8	51	48	46	30	44	18	19	13	14	19	35	62
9	50	54	46	30	48	18	18	13	14	18	32	44
10	51	56	46	30	39	17	19	13	13	19	34	44
11	54	55	46	32	36	17	18	14	13	20	38	44
12	54	54	46	32	32	18	18	14	13	21	41	39
13	55	55	46	32	24	18	18	12	13	20	31	39
14	55	55	46	34	23	18	18	12	13	24	34	53
15	54	56	45	34	27	18	18	11	13	24	31	41
16	54	54	22	34	31	18	18	11	12	25	29	40
17	54	53	45	36	24	18	18	11	13	24	35	41
18	48	52	45	36	23	18	17	11	13	21	36	40
19	52	52	45	36	24	18	18	10	13	25	33	41
20	53	50	36	36	23	16	52	10	13	25	33	41
21	48	49	27	45	23	16	85	10	12	25	36	42
22	45	48	27	48	26	16	80	11	12	25	44	40
23	46	48	13	50	23	16	77	11	13	25	33	38
24	45	48	16	50	20	16	71	11	13	26	36	36
25	45	47	20	50	17	16	72	11	12	31	36	38
26	46	47	25	48	17	16	84	11	15	32	33	39
27	49	47	31	43	17	18	50	11	13	30	31	37
28	41	47	37	36	17	18	21	11	15	31	36	35
29	38	46	39	36	---	18	18	11	15	31	44	35
30	50	46	41	35	---	18	17	11	21	32	44	35
31	49	---	43	35	---	19	---	9.6	---	33	52	---
TOTAL	1553	1518	1201	1152	839	557	969	384.6	383.2	691	1065	1389
MEAN	50.1	50.6	38.7	37.2	30.0	18.0	32.3	12.4	12.8	22.3	34.4	46.3
MAX	56	61	46	50	48	37	85	17	21	33	52	69
MIN	38	46	13	20	17	16	16	9.6	9.4	11	25	35
AC-FT	3080	3010	2380	2280	1660	1100	1920	763	760	1370	2110	2760

CAL YR 1988 TOTAL 28968 MEAN 79.1 MAX 475 MIN 13 AC-FT 57460
WTR YR 1989 TOTAL 11701.8 MEAN 32.1 MAX 85 MIN 9.4 AC-FT 23210

09237500 YAMPA RIVER NEAR OAK CREEK, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1984 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED SEDIMENT DISCHARGE: May 1985 to September 1988.

INSTRUMENTATION.--Automatic pumping sediment sampler May 1985 to September 1988.

REMARKS.--This station is part of a hydrologic investigation of the new reservoir.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	OXYGEN DEMAND, BIOCHEM 20 DAY, 20 DEG (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV 17...	1200	53	426	8.4	0.0	--	10.6	--	--	--	--
JAN 10...	1545	30	398	8.1	0.0	5.5	10.8	0.8	2.4	K13	K23
MAR 21...	1250	18	496	8.3	0.5	7.1	11.0	2.4	4.8	K3	27
APR 26...	1120	85	485	8.3	6.0	4.3	9.7	1.2	4.4	<1	K5
MAY 16...	1200	11	482	8.5	6.5	1.5	10.6	1.7	4.4	K1	K2
JUN 14...	1030	13	480	8.5	9.0	1.0	11.5	1.5	4.0	K1	K3
JUL 26...	1315	58	521	8.3	15.5	3.5	8.0	2.7	6.3	K47	97
AUG 22...	1145	43	526	8.1	14.5	1.1	4.7	1.4	5.0	K1	36

DATE	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)
NOV 17...	171	<0.01	<0.1	<0.1	0.04	1.1	0.30	0.03	0.02	<0.01
JAN 10...	30	<0.01	0.20	0.20	0.08	0.50	0.30	0.06	0.03	0.02
MAR 21...	18	<0.01	0.1	0.12	0.06	0.40	0.30	0.10	0.05	0.04
APR 26...	9	<0.01	<0.1	<0.1	0.04	0.40	0.30	0.04	0.02	0.02
MAY 16...	1	<0.01	<0.1	<0.1	0.05	0.60	0.60	0.06	0.03	0.02
JUN 14...	<1	<0.01	<0.1	<0.1	0.06	0.40	0.40	0.10	0.07	0.07
JUL 26...	18	<0.01	<0.1	<0.1	0.19	1.0	0.60	0.16	0.08	0.07
AUG 22...	3	0.01	<0.1	<0.1	0.43	1.3	1.1	0.18	0.15	0.15

DATE	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)
NOV 17...	220	53	21	12	0.4	2.3	167
APR 26...	230	56	21	14	0.4	3.2	163

DATE	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)
NOV 17...	62	2.4	0.2	19	272	0.37	38.9
APR 26...	93	3.4	0.2	15	304	0.41	69.7

K BASED ON NON-IDEAL COLONY COUNT.

09237500 YAMPA RIVER NEAR OAK CREEK, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ANTIMONY, TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)
NOV										
17...	2200	<1	2	100	<10	<1	3	<1	8	3800
APR										
26...	210	<1	<1	100	<10	<1	2	1	2	380

DATE	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LITHIUM TOTAL RECOVERABLE (UG/L AS LI)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
NOV										
17...	<5	20	220	<0.1	<1	5	4	<1	320	20
APR										
26...	<5	20	70	<0.1	5	<1	1	<1	280	20

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT					MAY				
04...	1330	52	372	10.0	11...	1115	20	470	10.0
NOV					AUG				
09...	0915	53	--	1.5	03...	1200	25	493	19.5
19...	0840	52	375	1.5	30...	1130	45	524	16.5
MAR									
09...	1200	19	389	6.0					
23...	1110	16	505	8.0					

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
04...	1330	52	236	33	21
NOV					
09...	0915	53	145	21	25
17...	1200	53	174	25	80
JAN					
10...	1545	30	75	6.1	78
MAR					
09...	1200	19	686	34	95
21...	1250	18	6	0.29	72
23...	1110	16	14	0.59	--
APR					
26...	1120	85	12	2.8	55
MAY					
16...	1200	11	4	0.12	--
JUN					
14...	1030	13	3	0.11	--
JUL					
03...	1515	12	11	0.36	63
26...	1315	58	50	7.8	69
AUG					
03...	1200	25	8	0.54	69
22...	1145	43	5	0.58	88
30...	1130	45	7	0.85	64

09238705 LONG LAKE INLET NEAR BUFFALO PASS, CO

LOCATION.--Lat 40°28'25", Long 106'40'46", in SE¼NW¼ sec. 23, T.6N., R.83W., Routt County, Hydrologic Unit 14050001, on left bank 0.1 mi above Long Lake, and 7.5 mi east of Steamboat Springs.

DRAINAGE AREA.--0.71 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,875 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 7 to Mar. 8. Records fair except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62 ft^3/s, June 16, 1988, gage height, 2.99 ft; no flow, Jan. 24-29, March 14-19, 26-30, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 33 ft^3/s at 1800 May 29, gage height, 2.77 ft; minimum daily, 0.03 ft^3/s, Aug. 28 to Sept. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.06	.06	.07	.08	.10	.07	.74	9.9	1.7	.11	.03
2	.07	.08	.05	.06	.07	.10	.07	.65	11	1.5	.23	.03
3	.06	.05	.06	.05	.07	.10	.06	.60	7.9	1.2	.17	.03
4	.06	.05	.06	.05	.06	.11	.06	.58	6.6	1.0	.12	.03
5	.08	.06	.06	.05	.06	.11	.06	.59	11	.84	.09	.03
6	.08	.09	.05	.06	.06	.12	.06	1.1	7.3	.70	.07	.03
7	.07	.08	.06	.06	.06	.11	.11	2.0	8.9	.57	.07	.03
8	.07	.07	.05	.07	.06	.10	.22	5.0	9.3	.52	.06	.11
9	.09	.06	.06	.06	.06	.14	.16	6.2	7.6	.44	.06	.08
10	.08	.06	.05	.07	.06	.22	.13	5.2	7.8	.38	.06	.05
11	.07	.06	.07	.06	.07	.23	.11	6.6	12	.39	.06	.04
12	.06	.06	.07	.05	.08	.17	.10	5.6	7.5	.62	.08	.04
13	.06	.06	.06	.06	.08	.14	.10	4.4	6.4	.56	.07	.16
14	.06	.08	.07	.07	.08	.13	.15	2.9	5.4	.35	.06	.10
15	.06	.10	.07	.06	.08	.12	.23	2.2	6.1	.24	.05	.04
16	.05	.08	.06	.05	.08	.10	.30	1.8	7.6	.17	.05	.04
17	.06	.07	.06	.06	.08	.10	.52	1.8	7.8	.13	.05	.05
18	.06	.06	.06	.07	.07	.10	.92	3.5	5.6	.12	.05	.05
19	.12	.05	.07	.06	.07	.08	1.2	5.3	6.0	.11	.17	.05
20	.18	.05	.06	.07	.07	.08	1.7	6.1	6.0	.11	.14	.09
21	.12	.06	.06	.07	.06	.08	2.0	6.4	4.6	.11	.07	.05
22	.09	.05	.07	.07	.06	.08	2.1	7.2	3.1	.12	.05	.04
23	.07	.06	.06	.08	.06	.08	2.3	8.6	2.7	.32	.04	.05
24	.06	.06	.07	.08	.07	.07	2.7	8.3	2.5	.64	.04	.05
25	.07	.06	.07	.08	.07	.07	2.7	6.9	2.4	.78	.04	.05
26	.07	.07	.06	.07	.08	.10	2.7	6.1	2.3	.60	.04	.05
27	.06	.07	.05	.07	.09	.09	2.5	9.0	2.1	.31	.04	.05
28	.06	.06	.05	.07	.10	.08	1.7	12	2.2	.37	.03	.05
29	.07	.07	.05	.08	---	.07	1.2	15	2.1	.33	.03	.05
30	.07	.07	.06	.08	---	.07	.89	13	1.9	.33	.03	.05
31	.06	---	.06	.08	---	.07	---	9.3	---	.17	.03	---
TOTAL	2.31	1.96	1.87	2.04	1.99	3.32	27.12	164.66	183.6	15.73	2.26	1.60
MEAN	.075	.065	.060	.066	.071	.11	.90	5.31	6.12	.51	.073	.053
MAX	.18	.10	.07	.08	.10	.23	2.7	15	12	1.7	.23	.16
MIN	.05	.05	.05	.05	.06	.07	.06	.58	1.9	.11	.03	.03
AC-FT	4.6	3.9	3.7	4.0	3.9	6.6	54	327	364	31	4.5	3.2

CAL YR 1988 TOTAL 645.80 MEAN 1.76 MAX 35 MIN .00 AC-FT 1280
WTR YR 1989 TOTAL 408.46 MEAN 1.12 MAX 15 MIN .03 AC-FT 810

09238705 LONG LAKE INLET NEAR BUFFALO PASS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July to September 1989.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
JUL 25...	1600	0.95	27	7.1	12.0	7.0	13	4.1	0.55

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
JUL 25...	1.1	0.1	0.3	13	<1.0	0.4	<0.1	5.4

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
JUL 25...	<0.01	<0.1	0.02	0.70	<0.01	<0.01	2	0.01

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 03...	1445	0.06	--	3.0
NOV 01...	1145	0.10	41	1.0
JAN 20...	1015	0.10	49	0.0
MAY 30...	1655	14	14	0.5
JUN 27...	1800	2.0	27	6.0
JUL 18...	1130	0.16	18	17.0
AUG 01...	1130	0.12	36	13.0

09238710 FISH CREEK TRIBUTARY BELOW LONG LAKE, NEAR BUFFALO PASS, CO.

LOCATION.--Lat 40°28'36", Long 106°41'13", in NE¼SE¼ sec. 22, T.6N., R.83W., Routt county, Hydrologic Unit 14050001, on right bank, 0.1 mi below Long Lake Spillway, and 7.5 mi east of Steamboat Springs.

DRAINAGE AREA.--1.03 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 29, 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,860 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: May 17-30. Records fair except for estimated daily discharges, which are poor. Flow regulated by Long Lake Reservoir, capacity 397 acre-ft, 0.1 mi upstream.

AVERAGE DISCHARGE.--5 years, 1.78 ft^3/s; 1,290 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 59 ft^3/s, June 17, 1986, from rating curve extended above 33 ft^3/s; maximum gage height, 3.13 ft, May 16, 1987 (backwater from ice); no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22 ft^3/s at 2300 June 2, gage height, 1.88 ft; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.04	14	2.4	.01	.00
2	.00	.00	.00	.00	.00	.00	.00	.04	16	2.1	.01	.00
3	.00	.00	.00	.00	.00	.00	.00	.04	14	1.9	.02	.00
4	.00	.00	.00	.00	.00	.00	.00	.05	10	1.6	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.05	13	1.3	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.06	13	1.1	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.07	11	1.0	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.09	13	.79	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.12	12	.69	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.14	11	.57	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.17	17	.51	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.20	13	.47	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.26	10	.52	.00	.01
14	.00	.00	.00	.00	.00	.00	.00	.37	9.0	.53	.00	.01
15	.00	.00	.00	.00	.00	.00	.00	.59	8.6	.46	.00	.00
16	.00	.00	.00	.00	.00	.00	.01	1.6	11	.35	.00	.00
17	.00	.00	.00	.00	.00	.00	.01	1.3	13	.26	.00	.00
18	.00	.00	.00	.00	.00	.00	.02	2.0	9.7	.17	.00	.00
19	.00	.00	.00	.00	.00	.00	.02	3.5	9.6	.15	.00	.00
20	.00	.00	.00	.00	.00	.00	.02	4.5	9.9	.13	.00	.00
21	.00	.00	.00	.00	.00	.00	.03	5.0	8.9	.10	.01	.00
22	.00	.00	.00	.00	.00	.00	.03	6.0	6.2	.06	.00	.00
23	.00	.00	.00	.00	.00	.00	.03	7.0	5.0	.03	.00	.00
24	.00	.00	.00	.00	.00	.00	.04	6.6	4.4	.04	.00	.00
25	.00	.00	.00	.00	.00	.00	.04	5.4	4.0	.03	.00	.00
26	.00	.00	.00	.00	.00	.00	.05	5.0	3.8	.04	.00	.00
27	.00	.00	.00	.00	.00	.00	.04	7.0	3.5	.02	.00	.00
28	.00	.00	.00	.00	.00	.00	.04	11	3.4	.02	.00	.00
29	.00	.00	.00	.00	---	.00	.04	14	3.1	.02	.00	.00
30	.00	.00	.00	.00	---	.00	.04	14	2.8	.02	.00	.00
31	.00	---	.00	.00	---	.00	---	15	---	.02	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.46	111.19	282.9	17.40	0.05	0.02
MEAN	.00	.00	.00	.00	.00	.00	.015	3.59	9.43	.56	.002	.001
MAX	.00	.00	.00	.00	.00	.00	.05	15	17	2.4	.02	.01
MIN	.00	.00	.00	.00	.00	.00	.00	.04	2.8	.02	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.9	221	561	35	.1	.04

CAL YR 1988 TOTAL 483.45 MEAN 1.32 MAX 34 MIN .00 AC-FT 959
WTR YR 1989 TOTAL 412.02 MEAN 1.13 MAX 17 MIN .00 AC-FT 817

09238710 FISH CREEK TRIBUTARY BELOW LONG LAKE NEAR BUFFALO PASS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July to September 1989.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
JUL										
25...	1620	0.03	19	7.3	18.5	6.4	8	2.6	0.38	0.8

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
JUL									
25...	0.1	0.2	7.0	1.0	0.3	<0.1	2.4	12	0.02

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
JUL									
25...	0.00	<0.01	<0.1	<0.01	0.30	<0.01	<0.01	18	0.00

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
MAY					JUL				
30...	1620	14	19	1.0	18...	1200	0.18	26	21.0
JUN					AUG				
27...	1730	3.5	46	9.5	01...	1145	0.01	19	14.0

09238750 MIDDLE FORK FISH CREEK NEAR BUFFALO PASS, CO

LOCATION.--Lat 40°26'54", Long 106°41'30", in NE¼SE¼ sec. 10, T.6N., R.83W., Routt County, Hydrologic Unit 14050001, on right bank, 0.25 mi above Fish Creek Reservoir, and 7.5 mi east of Steamboat Springs.

DRAINAGE AREA.--1.37 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 31, 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,955 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 13 to May 30. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--5 years, 3.75 ft^3/s; 2,720 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 146 ft^3/s, June 9, 1986, gage height, 4.56 ft, from rating curve extended above 24 ft^3/s; no flow, Feb. 17-20, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 47 ft^3/s, May 29; minimum daily, 0.05 ft^3/s, Mar. 13-15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	.17	.19	.20	.17	.11	.07	3.3	36	1.9	.46	.18
2	.18	.19	.18	.19	.17	.11	.07	3.2	39	1.7	1.1	.17
3	.18	.23	.20	.18	.17	.11	.07	3.1	31	1.4	.82	.17
4	.17	.22	.20	.18	.16	.11	.07	3.0	27	1.3	.50	.16
5	.18	.21	.20	.19	.16	.11	.07	3.0	36	1.1	.40	.17
6	.19	.19	.19	.20	.16	.10	.07	4.0	29	.97	.36	.17
7	.18	.20	.20	.19	.16	.10	.15	6.0	31	.87	.35	.16
8	.18	.21	.19	.18	.15	.10	.30	15	31	.81	.34	.43
9	.18	.20	.20	.19	.15	.09	.26	22	25	.77	.35	.62
10	.18	.20	.19	.20	.15	.08	.20	15	25	.70	.36	.36
11	.17	.20	.21	.19	.15	.07	.18	25	33	.72	.34	.26
12	.16	.20	.21	.19	.15	.06	.17	20	24	.90	.40	.34
13	.16	.20	.19	.19	.15	.05	.17	18	19	.88	.39	.72
14	.17	.22	.21	.18	.14	.05	.19	16	17	.69	.33	.55
15	.16	.25	.21	.19	.14	.05	.30	15	17	.56	.30	.35
16	.16	.23	.19	.19	.14	.06	.40	14	19	.49	.28	.28
17	.16	.22	.19	.18	.14	.06	.86	14	20	.45	.30	.24
18	.17	.19	.19	.19	.14	.06	1.2	18	13	.42	.32	.23
19	.20	.20	.20	.19	.13	.06	2.0	24	12	.39	.47	.22
20	.20	.19	.20	.19	.13	.06	2.5	29	11	.39	.47	.37
21	.18	.20	.19	.19	.13	.06	3.0	31	8.8	.40	.55	.52
22	.17	.19	.19	.19	.13	.06	3.5	33	5.8	.55	.36	.40
23	.16	.20	.20	.19	.13	.06	3.5	35	4.8	.72	.27	.30
24	.16	.19	.19	.18	.12	.06	3.8	39	3.9	1.2	.24	.26
25	.16	.19	.20	.18	.12	.06	4.5	35	3.4	1.5	.22	.23
26	.16	.20	.19	.18	.12	.08	5.0	31	3.0	1.0	.22	.21
27	.16	.20	.18	.18	.12	.07	4.5	37	2.6	.74	.21	.20
28	.16	.19	.18	.18	.12	.07	4.0	45	2.6	.92	.20	.20
29	.17	.20	.18	.18	---	.07	3.7	47	2.7	4.0	.19	.17
30	.17	.20	.19	.18	---	.07	3.5	44	2.3	1.7	.19	.15
31	.17	---	.19	.17	---	.07	---	34	---	.69	.18	---
TOTAL	5.33	6.08	6.02	5.78	4.00	2.33	48.30	681.6	534.9	30.83	11.47	8.79
MEAN	.17	.20	.19	.19	.14	.075	1.61	22.0	17.8	.99	.37	.29
MAX	.20	.25	.21	.20	.17	.11	5.0	47	39	4.0	1.1	.72
MIN	.16	.17	.18	.17	.12	.05	.07	3.0	2.3	39	.18	.15
AC-FT	11	12	12	11	7.9	4.6	96	1350	1060	61	23	17

CAL YR 1988 TOTAL 1226.69 MEAN 3.35 MAX 60 MIN .00 AC-FT 2430
WTR YR 1989 TOTAL 1345.43 MEAN 3.69 MAX 47 MIN .05 AC-FT 2670

09238750 MIDDLE FORK FISH CREEK NEAR BUFFALO PASS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July to September 1989.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
JUL									
25...	2000	7.2	23	7.2	10.0	7.5	9	2.6	0.55

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
JUL								
25...	1.6	0.2	0.3	10	<1.0	0.4	0.1	7.1

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
JUL								
25...	<0.01	<0.1	0.02	0.40	<0.01	<0.01	4	0.08

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT					JUN				
03...	1136	0.18	36	4.5	28...	1045	3.3	20	6.5
NOV					JUL				
01...	1015	0.20	36	1.5	18...	1030	0.47	18	13.0
JAN					AUG				
20...	1245	0.20	44	0.0	01...	0930	0.50	28	13.5
MAY									
30...	1730	44	12	0.5					

09238770 GRANITE CREEK NEAR BUFFALO PASS, CO

LOCATION.--Lat 40°29'35", Long 106°41'31", NE¼NE¼ sec. 15, T.6N., R.83W., Routt County, Hydrologic Unit 14050001, on left bank 0.1 mi upstream from Fish Creek Reservoir, and 7.5 mi east of Steamboat Springs.

DRAINAGE AREA.--2.82 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 31, 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,875 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Apr. 4 to May 30, June 1-28, and July 28-31. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--5 years, 7.04 ft^3/s; 5,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 103 ft^3/s, June 7, 1988; minimum daily, 0.13 ft^3/s, Mar. 21, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 76 ft^3/s, May 30; minimum daily, 0.26 ft^3/s, Oct. 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.46	.35	.47	.45	.48	.48	.56	6.6	68	6.4	2.1	.75
2	.45	.45	.46	.45	.48	.48	.56	6.4	64	5.7	2.0	.75
3	.47	.81	.47	.45	.48	.48	.56	6.0	54	5.1	1.5	.75
4	.47	.74	.47	.45	.48	.48	.56	5.8	47	4.5	1.3	.73
5	.47	.62	.47	.45	.48	.50	.56	6.0	58	4.0	1.2	.71
6	.48	.49	.47	.45	.48	.52	.56	7.0	50	3.6	1.1	.72
7	.45	.48	.48	.45	.48	.52	.62	15	54	3.0	1.1	.71
8	.45	.45	.48	.45	.48	.53	1.0	30	54	3.0	1.0	1.3
9	.42	.45	.48	.45	.48	.58	.93	40	47	2.7	1.0	1.9
10	.45	.45	.47	.45	.48	.77	.78	30	47	2.5	1.0	1.2
11	.40	.45	.48	.45	.48	.79	.71	45	56	2.6	1.0	.92
12	.38	.45	.48	.45	.48	.79	.70	35	45	3.6	1.1	1.2
13	.35	.45	.46	.45	.48	.79	.70	30	39	3.1	1.0	2.3
14	.31	.49	.48	.45	.48	.70	.74	25	33	2.3	.96	1.3
15	.32	.65	.48	.45	.48	.56	1.0	22	33	1.9	.96	.90
16	.31	.65	.47	.45	.48	.57	1.1	20	38	1.6	.94	.76
17	.31	.65	.47	.45	.48	.56	1.2	20	38	1.5	1.0	.70
18	.26	.65	.47	.45	.48	.56	2.0	27	32	1.4	.98	.70
19	.37	.65	.48	.45	.48	.56	2.4	32	30	1.4	1.8	.70
20	.49	.65	.48	.47	.48	.56	2.9	37	28	1.4	1.3	1.3
21	.50	.63	.48	.48	.48	.56	3.3	41	25	1.4	1.1	1.3
22	.50	.61	.48	.48	.48	.56	3.9	45	23	1.9	.94	.86
23	.48	.54	.48	.48	.48	.56	4.6	52	19	3.5	.92	.67
24	.47	.47	.48	.48	.48	.56	8.2	56	15	3.8	.88	.63
25	.45	.48	.48	.48	.48	.56	9.6	50	12	2.3	.88	.56
26	.46	.48	.48	.48	.48	.60	11	45	10	1.9	.88	.56
27	.45	.48	.48	.48	.48	.59	10	54	8.0	2.2	.87	.56
28	.46	.47	.48	.48	.48	.56	8.0	62	8.0	2.1	.86	.55
29	.45	.48	.48	.48	---	.56	7.0	74	8.2	2.0	.84	.48
30	.43	.48	.48	.48	---	.56	6.8	76	7.3	2.0	.83	.48
31	.36	---	.47	.48	---	.56	---	64	---	2.0	.80	---
TOTAL	13.08	16.15	14.74	14.30	13.44	18.01	92.54	1064.8	1050.5	86.4	34.14	26.95
MEAN	.42	.54	.48	.46	.48	.58	3.08	34.3	35.0	2.79	1.10	.90
MAX	.50	.81	.48	.48	.48	.79	11	76	68	6.4	2.1	2.3
MIN	.26	.35	.46	.45	.48	.48	.56	5.8	7.3	1.4	.80	.48
AC-FT	26	32	29	28	27	36	184	2110	2080	171	68	53

CAL YR 1988 TOTAL 2592.11 MEAN 7.08 MAX 103 MIN .13 AC-FT 5140
WTR YR 1989 TOTAL 2445.05 MEAN 6.70 MAX 76 MIN .25 AC-FT 4850

09238770 GRANITE CREEK NEAR BUFFALO PASS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July to September 1989.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
JUL									
26...	0840	3.7	21	7.0	9.0	8.0	8	2.8	0.34

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
JUL								
26...	1.2	0.2	0.3	9.0	<1.0	0.6	<0.1	6.1

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
JUL								
26...	<0.01	<0.1	0.02	0.40	0.01	<0.01	1	0.01

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT					JUN				
03...	1245	0.47	37	5.0	28...	1000	10	22	6.5
NOV					JUL				
01...	1110	0.30	35	3.5	18...	1100	1.6	22	17.5
JAN					AUG				
20...	1130	0.50	47	0.0	01...	1030	1.3	29	14.0
MAY					29...	1040	0.84	39	12.0
30...	1525	71	13	1.0					

09238800 MIDDLE FORK FISH CREEK TRIBUTARY, BELOW FISH CREEK RESERVOIR, CO

LOCATION.--Lat 40°29'50", Long 106°41'54", in NW¼SE¼ sec. 10, T.6N., R.83W., Routt County, Hydrologic Unit 14050001, on right bank, at Fish Creek Reservoir Spillway, and 7.5 mi east of Steamboat Springs.

DRAINAGE AREA.--4.78 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 31, 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,855 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: May 21-23. Records excellent except for periods of flow, which are fair. Flow regulated by Fish Creek Reservoir, capacity, 1,840 acre-ft.

AVERAGE DISCHARGE.--5 years, 7.70 ft^3/s; 5,580 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 186 ft^3/s, June 15, 1988, gage height, 1.82 ft; maximum gage height, 3.67 ft, May 10, 1987 (ice jam); no flow many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 141 ft^3/s, at 2000 May 30, gage height, 1.58 ft; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	95	7.5	.27	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	102	6.4	.25	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	99	5.8	.25	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	75	5.1	.10	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	99	4.3	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	93	3.5	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	87	2.9	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	97	2.5	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	86	2.2	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	75	1.8	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	96	1.5	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	88	1.3	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	70	1.5	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	62	1.5	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	56	1.2	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	60	.82	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	70	.44	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.66	54	.05	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	1.2	46	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	5.4	42	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	20	37	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	45	29	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	60	23	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	74	19	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	70	17	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	55	14	.47	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	69	12	.40	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	87	11	.36	.00	.00
29	.00	.00	.00	.00	---	.00	.00	110	9.5	.35	.00	.00
30	.00	.00	.00	.00	---	.00	.00	113	9.0	.88	.00	.00
31	.00	---	.00	.00	---	.00	---	97	---	.64	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	807.26	1732.5	53.41	0.87	0.00
MEAN	.00	.00	.00	.00	.00	.00	.00	26.0	57.7	1.72	.028	.00
MAX	.00	.00	.00	.00	.00	.00	.00	113	102	7.5	.27	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	9.0	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	1600	3440	106	1.7	.00

CAL YR 1988 TOTAL 2873.91 MEAN 7.85 MAX 143 MIN .00 AC-FT 5700
WTR YR 1989 TOTAL 2594.04 MEAN 7.11 MAX 113 MIN .00 AC-FT 5150

09238800 MIDDLE FORK FISH CREEK TRIBUTARY BELOW FISH CREEK RESERVOIR, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July to September 1989.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
JUL 25...	1930	0.02	15	7.2	14.5	6.8	6	1.8	0.36

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
JUL 25...	0.9	0.2	0.3	6.0	<1.0	0.3	0.1	3.9

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
JUL 25...	<0.01	<0.1	0.01	0.80	<0.01	<0.01	8	0.00

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
MAY 30...	1520	101	17	1.0	JUL 18...	1250	0.02	30	20.0
JUN 28...	0820	9.8	32	7.0	AUG 01...	1050	0.26	18	20.0

09238900 FISH CREEK AT UPPER STATION, NEAR STEAMBOAT SPRINGS, CO

LOCATION.--Lat 40°28'30", long 106°47'11", in SE¼SE¼ sec.15, T.6 N., R.84 W., Routt County, Hydrologic Unit 14050001, on right bank 2.6 mi upstream from mouth and 2.5 mi east of Steamboat Springs.

DRAINAGE AREA.--24.8 mi².

PERIOD OF RECORD.--October 1966 to September 1972, May 1982 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 7,150 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 29 to Dec.29, and Jan. 8 to Mar. 15. Records good except for estimated daily discharges, which are fair. Diversions upstream from station by Mount Werner Recreation district and City of Steamboat Springs for domestic use began in 1972 (see table below for figures of diversion). Natural flow of stream affected by storage in Fish Creek and Long Lake Reservoir, combined capacity 2,237 acre-ft. Several observations of specific conductance and water temperature were obtained and are published elswhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,110 ft³/s, June 20, 1968, gage height, 3.14 ft; minimum daily, 0.01 ft³/s, Aug. 7, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 637 ft³/s, at 1845 May 22, gage height, 2.54 ft; minimum daily, 1.7 ft³/s, Nov. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	1.8	2.7	2.4	2.7	6.4	14	47	350	34	6.9	2.4
2	2.9	1.7	2.7	2.3	2.8	7.0	14	47	370	30	11	2.3
3	2.9	2.6	2.7	2.2	2.9	7.5	13	49	313	26	12	2.2
4	2.9	2.6	2.6	2.2	3.0	8.0	12	47	259	22	8.9	1.9
5	2.3	2.2	2.7	2.1	3.0	8.2	11	46	301	18	7.0	1.9
6	2.8	2.2	2.6	2.1	2.9	8.2	12	65	282	16	6.2	2.8
7	2.5	2.8	2.6	2.0	2.8	8.4	17	105	258	13	5.4	2.2
8	2.5	2.8	2.5	2.0	2.8	8.6	24	163	283	12	4.9	6.4
9	2.6	2.2	2.6	2.0	2.8	8.8	21	203	252	11	4.0	11
10	3.1	3.3	2.5	2.1	2.7	9.0	23	235	236	10	4.6	7.5
11	2.9	3.0	2.5	2.1	2.7	9.2	19	240	309	9.9	4.0	6.4
12	3.0	3.4	2.5	2.2	2.8	9.0	20	205	256	11	5.1	8.5
13	3.1	3.7	2.5	2.3	2.9	8.7	23	137	212	14	5.9	8.9
14	2.8	3.7	2.5	2.4	2.9	8.5	28	133	189	10	5.0	10
15	2.4	3.6	2.5	2.5	3.0	8.4	34	107	186	7.5	4.4	7.9
16	2.5	3.4	2.6	2.5	3.0	8.9	40	97	207	6.0	3.9	6.5
17	2.5	4.2	2.4	2.5	3.2	8.8	51	98	212	5.3	3.5	5.4
18	2.5	3.8	2.5	2.5	3.4	9.6	66	155	165	4.2	4.3	5.1
19	2.8	3.6	2.6	2.5	3.5	9.1	76	207	152	3.2	5.4	5.1
20	3.2	3.6	2.6	2.5	3.5	8.4	98	246	140	2.5	8.4	6.6
21	2.9	3.5	2.5	2.6	3.7	8.4	106	248	120	2.3	7.5	8.3
22	2.7	3.3	2.5	2.7	3.9	7.5	112	364	93	4.5	5.6	7.6
23	2.5	3.4	2.6	2.8	4.0	7.2	124	406	78	9.4	4.0	6.8
24	2.4	3.4	2.5	2.9	4.2	8.1	137	328	70	16	3.1	6.1
25	2.4	3.4	2.5	3.0	4.5	11	137	277	64	13	3.1	5.5
26	2.4	3.3	2.5	2.9	5.0	14	135	243	57	15	2.6	5.2
27	2.4	2.8	2.6	2.9	5.4	14	118	297	51	9.5	2.1	5.4
28	1.9	2.9	2.5	2.9	5.8	15	83	385	46	13	1.9	5.2
29	2.0	3.2	2.5	2.8	---	19	65	459	43	13	2.1	4.9
30	2.1	2.7	2.5	2.7	---	16	54	441	39	17	3.0	5.0
31	1.8	---	2.4	2.7	---	17	---	361	---	9.2	3.1	---
TOTAL	80.7	92.1	79.0	76.3	95.8	305.9	1687	6441	5593	387.5	158.9	171.0
MEAN	2.60	3.07	2.55	2.46	3.42	9.87	56.2	208	186	12.5	5.13	5.70
MAX	3.2	4.2	2.7	3.0	5.8	19	137	459	370	34	12	11
MIN	1.8	1.7	2.4	2.0	2.7	6.4	11	46	39	2.3	1.9	1.9
AC-FT	160	183	157	151	190	607	3350	12780	11090	769	315	339
a	160	150	173	199	167	207	157	202	328	399	287	245

CAL YR 1988 TOTAL 19560.53 MEAN 53.4 MAX 612 MIN .28 AC-FT 38800
WTR YR 1989 TOTAL 15168.2 MEAN 41.6 MAX 459 MIN 1.7 AC-FT 30090

a-Diversions, in acre-feet, by Mount Werner Water and Sanitation District, and City of Steamboat Springs.

09239500 YAMPA RIVER AT STEAMBOAT SPRINGS, CO

LOCATION.--Lat 40°29'01", long 106°49'54", in NW¼NE¼ sec.17, T.6 N., R.84W., Routt County, Hydrologic Unit 14050001, on left bank 30 ft upstream from Fifth Street Bridge in Steamboat Springs and 0.6 mi upstream from Soda Creek.

DRAINAGE AREA.--604 mi².

PERIOD OF RECORD.--May 1904 to October 1906, October 1909 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 764: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,695.47 ft above National Geodetic Vertical Datum of 1929. Prior to May 8, 1905, nonrecording gage at bridge 0.2 mi upstream at datum 4.16 ft, higher. May 8, 1905, to Oct. 31, 1906, nonrecording gage on bridge 30 ft upstream at datum 0.44 ft, higher. Mar. 8, 1910, to Sept. 11, 1934, water-stage recorder on right bank, 60 ft downstream, at datum 0.44 ft, higher. Sept. 11, 1934, to Aug. 17, 1988, water-stage recorder on right bank, 60 ft downstream, at present datum.

REMARKS.--Estimated daily discharges: Oct. 1 to May 11. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by two diversions for irrigation to Egeria Creek in Colorado River basin, one diversion for irrigation from Trout Creek drainage to Oak Creek drainage, irrigation of about 19,700 acres upstream from station, and by storage in Stillwater, Yampa, Yamcola, Stagecoach, and Catamount Reservoirs, (total capacity 56,895 acre-ft). Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--82 years, 469 ft³/s; 339,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,820 ft³/s, June 14, 1921, gage height, 7.08 ft, present datum, from rating curve extended above 4,800 ft³/s; maximum gage height, 7.12 ft, June 25, 1984; minimum daily discharge, 4.0 ft³/s, Sept. 8, 1934, Sept. 10-13, 1944.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 29	2200	*2,030	*5.19				

Minimum daily, 46 ft³/s, Oct. 31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	49	100	60	55	69	199	528	1360	148	92	64
2	140	50	95	56	56	73	202	502	1290	126	94	68
3	150	60	90	58	56	90	187	533	1160	108	111	62
4	160	64	85	58	56	96	176	542	1030	96	101	67
5	140	62	90	49	58	98	166	515	1050	85	93	69
6	160	64	85	53	58	98	194	542	1000	78	81	75
7	150	65	100	52	57	100	239	702	903	71	73	74
8	150	70	95	52	56	105	256	960	941	66	68	86
9	140	80	90	50	55	110	245	1240	899	61	66	98
10	120	90	110	50	55	110	232	1390	828	65	68	87
11	110	85	100	50	55	115	208	1460	919	63	69	78
12	90	90	110	53	54	105	201	1490	849	70	81	88
13	80	100	120	50	54	95	213	1160	770	79	101	95
14	74	105	110	54	53	95	235	1060	693	82	85	92
15	70	110	100	54	51	92	272	910	644	79	75	91
16	70	100	110	54	53	92	310	823	644	71	69	80
17	70	85	120	54	56	92	362	790	688	63	64	74
18	70	80	130	54	59	120	430	940	595	58	68	71
19	72	85	120	55	58	115	550	1230	531	62	72	66
20	74	75	110	54	56	110	680	1290	480	56	80	69
21	70	80	110	55	57	110	786	1370	424	57	81	76
22	65	90	100	56	58	105	871	1430	369	58	78	81
23	70	110	100	58	57	125	928	1660	325	82	76	75
24	65	100	90	60	60	157	1080	1620	295	114	69	70
25	64	90	90	61	63	180	1110	1490	258	93	63	67
26	60	100	80	60	66	200	1120	1260	230	107	60	65
27	57	130	85	60	63	214	1000	1350	211	90	58	64
28	52	115	80	60	65	223	834	1520	192	100	55	63
29	54	106	75	59	---	250	680	1710	176	98	54	61
30	52	100	70	55	---	231	589	1680	159	119	59	60
31	46	---	65	56	---	229	---	1480	---	116	61	---
TOTAL	2875	2590	3015	1710	1600	4004	14555	35177	19913	2621	2325	2236
MEAN	92.7	86.3	97.3	55.2	57.1	129	485	1135	664	84.5	75.0	74.5
MAX	160	130	130	61	66	250	1120	1710	1360	148	111	98
MIN	46	49	65	49	51	69	166	502	159	56	54	60
AC-FT	5700	5140	5980	3390	3170	7940	28870	69770	39500	5200	4610	4440

CAL YR 1988 TOTAL 137460 MEAN 376 MAX 2760 MIN 46 AC-FT 272700
WTR YR 1989 TOTAL 92621 MEAN 254 MAX 1710 MIN 46 AC-FT 183700

09240900 ELK RIVER ABOVE CLARK, CO

LOCATION.--Lat 40°44'38", long 106°51'13", in SW¼SE¼ sec.13, T.9 N., R.85 W., Routt County, Hydrologic Unit 14050001, on right bank 0.4 mi upstream from Willow Creek, 1.8 mi downstream from Coulton Creek and 3.3 mi northeast of Clark, CO.

DRAINAGE AREA.--122 mi^2.

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,525 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 10 to Mar. 8, and Mar. 22 to Apr. 25. Records fair except for estimated daily discharges, which are poor. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,320 ft^3/s, May 18, 1988, gage height, 6.03 ft; minimum daily, 17 ft^3/s, Nov. 9, 10, 13, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,290 ft^3/s at 2100 May 29, gage height, 4.86 ft; minimum daily, 27 ft^3/s, Feb. 9, 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	39	40	32	32	30	56	214	822	336	109	40
2	65	40	42	30	32	31	60	237	821	321	107	39
3	61	41	44	34	32	29	59	247	748	279	106	39
4	61	45	42	36	30	28	58	229	629	260	97	37
5	61	42	38	34	30	37	58	245	651	258	93	37
6	62	43	40	35	31	43	58	344	741	247	86	36
7	63	42	42	36	33	41	59	455	714	228	84	36
8	60	42	35	38	32	40	65	575	767	224	84	43
9	58	39	37	36	27	54	75	702	759	211	77	81
10	57	39	39	36	31	52	80	765	775	198	77	72
11	59	39	35	37	27	53	70	764	942	194	73	73
12	56	39	33	35	29	68	60	746	929	196	102	68
13	54	38	31	34	30	62	65	499	820	203	102	70
14	53	42	30	39	29	44	72	468	807	177	82	64
15	52	38	30	33	30	45	90	398	793	163	73	58
16	50	36	32	35	31	49	120	370	889	148	67	54
17	50	38	35	33	31	48	160	385	927	136	68	50
18	48	42	36	30	29	44	220	500	787	128	68	48
19	47	40	38	30	29	45	280	669	782	123	64	46
20	50	37	39	30	29	45	340	642	790	117	76	49
21	47	38	37	30	30	42	360	750	661	114	78	57
22	47	40	35	30	31	44	370	775	524	112	69	56
23	46	38	35	31	31	46	380	388	473	180	65	49
24	46	36	37	31	32	50	420	817	435	210	61	48
25	42	41	39	31	35	47	460	621	421	146	52	46
26	36	31	37	33	39	52	530	505	438	127	53	45
27	40	38	35	34	30	58	470	575	401	113	53	44
28	40	39	36	34	30	62	344	775	390	141	51	44
29	40	38	38	32	---	60	264	941	390	117	46	44
30	40	34	35	31	---	62	235	1000	350	170	47	43
31	39	---	33	33	---	60	---	891	---	125	41	---
TOTAL	1597	1174	1135	1033	862	1471	5938	17992	20376	5702	2311	1516
MEAN	51.5	39.1	36.6	33.3	30.8	47.5	198	580	679	184	74.5	50.5
MAX	67	45	44	39	39	68	530	1000	942	336	109	81
MIN	36	31	30	30	27	28	56	214	350	112	41	36
AC-FT	3170	2330	2250	2050	1710	2920	11780	35690	40420	11310	4580	3010

CAL YR 1988 TOTAL 79167 MEAN 216 MAX 1900 MIN 30 AC-FT 157000
WTR YR 1989 TOTAL 61107 MEAN 167 MAX 1000 MIN 27 AC-FT 121200

09241000 ELK RIVER AT CLARK, CO

LOCATION.--Lat 40°43'03", long 106°54'55", in NW¼NW¼ sec.27, T.9 N., R.85 W., Routt County, Hydrologic Unit 14050001, on left bank 30 ft downstream from bridge on State Highway 129, 0.8 mi north of Clark, and 2.0 mi upstream from Cottonwood Gulch.

DRAINAGE AREA.--216 mi².

PERIOD OF RECORD.--May 1910 to September 1922 (published as "near Clark"), April 1930 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1733: 1956. WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,267.75 ft, (State Highway Department bench mark). May 1910 to September 1922, nonrecording gage at site 30 ft upstream at datum 0.15 ft, lower. Apr. 23, 1930, to Sept. 27, 1934, water-stage recorder at present site at datum 0.15 ft, lower.

REMARKS.--Estimated daily discharges: Nov. 5 to Mar. 16. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 230 acres upstream from and about 460 acres downstream from station. Natural flow of stream affected by storage in Lester Creek Reservoir (known also as Pearl Lake), capacity, 5,660 acre-ft, since 1963, and Steamboat Lake, capacity, 23,060 acre-ft, since 1968. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--71 years, 336 ft³/s; 243,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,910 ft³/s, May 23, 1984, gage height, 6.12 ft; minimum daily determined, 22 ft³/s, Dec. 12, 1963, but a lesser discharge may have occurred during periods of no gage-height record prior to 1939.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,900 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 20	0100	*1,210	*3.53				

Minimum daily, 34 ft³/s, Nov. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	34	50	60	60	50	114	428	778	337	129	76
2	44	38	52	60	60	50	119	444	800	314	129	73
3	43	41	54	60	54	60	117	448	790	291	122	73
4	43	46	52	66	47	50	115	421	691	276	109	72
5	44	42	50	62	50	67	113	416	679	262	99	73
6	48	45	52	62	52	90	112	516	768	248	89	73
7	45	42	56	62	54	84	114	650	797	231	83	73
8	44	45	50	66	50	84	134	760	845	224	85	70
9	43	44	54	62	47	100	160	826	794	214	77	86
10	44	42	58	62	50	100	163	881	787	205	75	83
11	43	42	54	62	48	100	142	909	909	197	71	77
12	41	42	54	64	49	120	123	895	937	191	117	77
13	41	42	50	66	50	115	130	670	826	206	114	79
14	40	41	48	64	49	100	155	623	797	193	77	74
15	40	44	45	64	49	105	197	575	812	170	70	66
16	40	43	47	60	50	100	250	548	868	157	66	59
17	39	45	50	60	50	100	327	544	929	146	63	56
18	39	47	52	60	48	105	464	634	772	137	62	52
19	39	49	56	60	48	102	539	783	791	129	65	50
20	41	49	52	60	48	105	579	761	808	125	75	57
21	40	45	50	60	50	107	681	822	712	120	76	66
22	39	46	48	60	50	108	690	833	542	117	66	63
23	38	48	48	60	50	109	699	948	462	189	62	55
24	38	46	50	60	52	112	801	914	416	246	58	52
25	38	44	52	60	58	110	863	752	411	164	53	49
26	37	47	50	60	62	113	819	596	413	145	51	47
27	37	46	52	60	48	122	724	623	391	137	48	45
28	36	50	60	60	50	125	615	760	380	166	46	46
29	36	52	66	60	---	120	535	924	375	152	44	46
30	37	50	64	60	---	123	468	973	351	212	68	45
31	35	---	62	60	---	120	---	851	---	148	68	---
TOTAL	1259	1337	1638	1902	1433	3056	11062	21728	20631	6049	2417	1913
MEAN	40.6	44.6	52.8	61.4	51.2	98.6	369	701	688	195	78.0	63.8
MAX	48	52	66	66	62	125	863	973	937	337	129	86
MIN	35	34	45	60	47	50	112	416	351	117	44	45
AC-FT	2500	2650	3250	3770	2840	6060	21940	43100	40920	12000	4790	3790

CAL YR 1988 TOTAL 92648 MEAN 253 MAX 2100 MIN 33 AC-FT 183800
WTR YR 1989 TOTAL 74425 MEAN 204 MAX 973 MIN 34 AC-FT 147600

09243700 MIDDLE CREEK NEAR OAK CREEK, CO

LOCATION.--Lat 40°23'08", long 106°59'33", in SW¼SW¼ sec.13, T.5 N., R.86 W., Routt County, Hydrologic Unit 1450001, on left bank 1.1 mi above mouth of Foidel Creek and 13.5 mi northwest of Oak Creek.

DRAINAGE AREA.--23.5 mi^2.

PERIOD OF RECORD.--October 1975 to September 1981, April 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,720 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 2 to Mar. 16, and Apr. 13-17. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--13 years (water years 1976-81, 83-89), 4.55 ft^3/s; 3,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 329 ft^3/s, May 14, 1984, gage height, 4.08 ft, from rating curve extended above 77 ft^3/s; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 26	1000	*19	*1.99				

No flow several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.28	.46	.38	.60	.74	.72	4.2	9.7	1.7	.16	.06	.00
2	.22	.41	.38	.60	.74	.72	4.2	8.9	1.7	.13	.06	.00
3	.22	.43	.42	.60	.66	.72	7.5	9.1	1.6	.13	.08	.00
4	.22	.45	.42	.60	.54	.72	10	9.2	1.7	.10	.05	.00
5	.22	.45	.45	.62	.50	.72	9.9	8.0	1.7	.10	.03	.00
6	.22	.48	.56	.64	.45	.72	9.4	6.8	1.5	.08	.01	.00
7	.19	.50	.56	.66	.40	.72	9.1	6.1	1.5	.08	.00	.00
8	.19	.50	.54	.68	.37	.72	9.7	6.2	1.5	.07	.00	.00
9	.19	.50	.54	.70	.40	.72	11	5.5	1.6	.06	.00	.00
10	.20	.54	.52	.70	.45	.72	12	5.1	1.5	.07	.00	.00
11	.20	.60	.50	.70	.60	.85	13	4.6	1.4	.08	.00	.00
12	.19	.50	.50	.70	.65	.90	14	5.2	1.2	.14	.00	.00
13	.19	.60	.50	.70	.70	1.0	14	5.6	1.2	.27	.00	.00
14	.20	.50	.50	.70	.70	1.5	15	5.7	1.0	.17	.00	.00
15	.19	.56	.50	.70	.70	1.5	15	6.1	.81	.10	.00	.00
16	.19	.50	.50	.70	.70	2.0	16	6.4	.66	.10	.00	.00
17	.17	.50	.60	.70	.70	2.2	16	5.8	.69	.06	.00	.00
18	.17	.54	.54	.70	.70	2.3	15	4.5	.61	.05	.00	.00
19	.17	.45	.54	.70	.70	2.5	17	3.5	.51	.05	.00	.00
20	.37	.35	.54	.70	.70	2.6	17	3.2	.41	.03	.00	.00
21	.38	.37	.54	.70	.70	2.6	18	3.0	.28	.00	.02	.00
22	.28	.38	.64	.70	.70	2.7	17	2.9	.33	.01	.05	.00
23	.25	.42	.50	.70	.70	2.7	17	2.6	.38	.05	.01	.00
24	.25	.42	.50	.70	.70	2.9	17	2.3	.46	.16	.00	.00
25	.38	.56	.54	.70	.70	3.0	16	2.3	.39	.17	.00	.00
26	.41	.42	.56	.74	.70	3.1	15	2.4	.28	.07	.00	.00
27	.29	.42	.56	.80	.70	3.2	14	2.2	.23	.06	.00	.00
28	.32	.38	.56	.80	.70	3.4	12	1.9	.20	.07	.00	.00
29	.32	.38	.64	.80	---	5.2	11	1.7	.18	.07	.00	.00
30	.39	.38	.64	.74	---	4.0	10	1.6	.18	.09	.00	.00
31	.46	---	.60	.74	---	3.1	---	1.5	---	.07	.00	---
TOTAL	7.92	13.95	16.27	21.52	17.70	60.45	386.0	149.6	27.40	2.85	0.37	0.00
MEAN	.26	.46	.52	.69	.63	1.95	12.9	4.83	.91	.092	.012	.00
MAX	.46	.60	.64	.80	.74	5.2	18	9.7	1.7	.27	.08	.00
MIN	.17	.35	.38	.60	.37	.72	4.2	1.5	.18	.00	.00	.00
AC-FT	16	28	32	43	35	120	766	297	54	5.7	.7	.0

CAL YR 1988 TOTAL 1126.23 MEAN 3.08 MAX 18 MIN .00 AC-FT 2230
WTR YR 1989 TOTAL 704.03 MEAN 1.93 MAX 18 MIN .00 AC-FT 1400

09243800 FOIDEL CREEK NEAR OAK CREEK, CO

LOCATION.--Lat 40°20'45", long 107°05'04", in NW¼SW¼ sec.31, T.5 N., R.86 W., Routt County, Hydrologic Unit 14050001, on right bank 2.3 mi downstream from Reservoir No. 1, 6.9 mi upstream from mouth, and 8.7 mi northwest of Oak Creek.

DRAINAGE AREA.--8.61 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1975 to October 1981, April 1982 to September 1983, October 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,880 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 19-25, Dec. 2 to Mar. 25, Apr. 16-18, Aug. 2-3, 16-30, and Sep. 25-30. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--12 years (water years 1976-81, 1983, 1985-89), 1.46 ft^3/s; 1,060 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55 ft^3/s, Apr. 21, 1980, gage height, 3.38 ft; no flow many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 39 ft^3/s, at 0330 Apr. 6, gage height, 2.88 ft; minimum daily, 0.02 ft^3/s, Aug. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.32	.30	.31	1.1	1.1	1.0	5.5	4.1	1.6	.55	.28	.14
2	.33	.30	.35	1.1	1.1	1.0	5.4	4.1	1.6	.54	.22	.14
3	.31	.40	.35	1.1	.90	1.1	5.3	4.3	1.5	.55	.16	.09
4	.30	.53	.45	1.0	.80	1.1	5.3	4.5	1.6	.55	.13	.11
5	.31	.45	.60	1.0	.70	1.1	13	4.2	1.6	.51	.10	.10
6	.31	.41	.60	1.0	.60	1.2	26	4.0	1.6	.46	.07	.10
7	.31	.37	.60	1.0	.50	1.2	21	3.9	1.4	.44	.07	.12
8	.36	.40	.60	1.0	.45	1.3	11	3.8	1.4	.44	.04	.12
9	.35	.63	.60	1.0	.60	1.4	8.3	3.7	1.4	.49	.05	.12
10	.31	.60	.58	1.0	.65	1.5	7.7	3.6	1.3	.51	.10	.14
11	.30	.64	.56	1.0	.70	1.6	6.9	3.5	1.3	.52	.09	.33
12	.32	.59	.62	1.0	.75	1.7	6.6	3.5	1.2	.69	.10	.27
13	.31	.54	.70	1.0	.75	1.8	6.7	3.4	1.1	.80	.08	.26
14	.31	.58	.77	1.0	.80	1.9	6.6	3.3	.99	.69	.11	.18
15	.36	.73	.70	1.0	.80	2.0	6.3	3.4	.94	.61	.09	.17
16	.34	.60	.64	1.0	.80	2.2	6.4	3.4	.90	.57	.39	.29
17	.34	.54	.64	1.0	.84	2.4	6.0	3.3	.89	.51	.27	.33
18	.33	.49	.64	1.0	.84	2.8	5.8	3.2	.88	.44	.15	.35
19	.32	.51	.64	1.0	.84	3.0	5.3	3.0	.85	.40	.14	.35
20	.30	.28	.64	1.0	.88	3.2	5.0	2.8	.77	.34	.11	.35
21	.30	.23	.90	1.0	.88	3.4	4.9	2.7	.75	.31	.06	.35
22	.30	.23	.80	1.0	.88	3.6	4.8	2.5	.73	.43	.05	.35
23	.30	.27	.80	1.0	.90	4.0	4.6	2.4	.73	.68	.02	.36
24	.30	.43	.90	1.0	.90	4.5	4.6	2.2	.73	.61	.51	.34
25	.30	.45	1.0	1.0	.94	5.0	4.6	2.1	.73	.42	.96	.34
26	.30	.45	1.1	1.1	.96	7.4	4.5	2.1	.72	.31	.50	.34
27	.30	.44	1.1	1.1	.98	6.3	4.4	2.0	.68	.30	.50	.33
28	.30	.34	1.1	1.1	1.0	5.6	4.3	1.9	.65	.23	.50	.33
29	.30	.34	1.2	1.2	---	5.4	4.2	1.9	.61	.57	.50	.32
30	.30	.33	1.2	1.2	---	5.5	4.2	1.8	.58	.55	.50	.32
31	.31	---	1.1	1.1	---	5.8	---	1.6	---	.39	.28	---
TOTAL	9.75	13.40	22.79	32.1	22.84	91.0	215.2	96.2	31.73	15.41	7.13	7.44
MEAN	.31	.45	.74	1.04	.82	2.94	7.17	3.10	1.06	.50	.23	.25
MAX	.36	.73	1.2	1.2	1.1	7.4	26	4.5	1.6	.80	.96	.36
MIN	.30	.23	.31	1.0	.45	1.0	4.2	1.6	.58	.23	.02	.09
AC-FT	19	27	45	64	45	180	427	191	63	31	14	15

CAL YR 1988 TOTAL 728.43 MEAN 1.99 MAX 26 MIN .21 AC-FT 1440
WTR YR 1989 TOTAL 564.99 MEAN 1.55 MAX 26 MIN .02 AC-FT 1120

09243800 FOIDEL CREEK NEAR OAK CREEK, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1975 to September 1983, October 1984 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1976 to September 1981, April 1982 to September 1983, March 1986 to September 1988.
WATER TEMPERATURES: May 1976 to September 1981, April 1982 to September 1983, March 1986 to September 1988.

INSTRUMENTATION.--Water-quality monitor May 1976 to September 1981, April 1982 to September 1983, March 1986 to September 1988.

REMARKS.--Unpublished maximum and minimum specific conductance data for periods of daily record available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 3,080 microsiemens Dec. 16, 1987; minimum, 200 microsiemens Apr. 21, 22, 1980.
WATER TEMPERATURES: Maximum, 31.5°C July 30, 1983; minimum, 0.0°C during winter period when flowing each year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO
MAR											
07...	1130	1.2	2760	8.1	0.0	10.2	1800	360	210	68	0.7
APR											
18...	1100	5.7	1630	8.4	11.0	12.5	950	200	110	40	0.6
JUL											
25...	1045	0.65	2840	8.0	18.0	7.0	1800	320	250	57	0.6
AUG											
23...	1045	0.01	2830	8.0	14.5	7.5	1800	350	230	65	0.7

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
MAR										
07...	5.5	426	1400	7.6	0.2	14	2320	3.16	7.53	0.51
APR										
18...	4.8	261	780	5.2	0.2	7.4	1310	1.78	20.1	0.52
JUL										
25...	5.2	195	1800	5.3	0.1	7.1	2560	3.48	4.50	<0.1
AUG										
23...	6.1	284	1800	5.3	0.1	6.0	2630	3.58	0.07	<0.1

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)
OCT					
25...	1230	0.29	2690	--	6.5
DEC					
14...	1215	0.77	2650	7.6	0.5
JAN					
19...	1315	1.2	2860	7.7	0.5
FEB					
15...	1320	0.81	2840	8.2	0.0
MAY					
10...	1020	3.7	2560	8.2	17.0
JUN					
07...	1015	1.5	2760	8.0	18.0
JUL					
07...	1250	0.48	2920	7.8	18.0

09243900 FOIDEL CREEK AT MOUTH, NEAR OAK CREEK, CO

LOCATION.--Lat 40°23'25", long 106°59'39", in SE¼SE¼ sec.14, T.5 N., R.86 W., Routt County, Hydrologic Unit 14050001, on left bank 0.9 mi upstream from mouth and 13.6 mi northwest of Oak Creek.

DRAINAGE AREA.--17.5 mi².

PERIOD OF RECORD.--October 1975 to September 1981, June 1982 to current year.

REVISED RECORDS.--WDR CO-78-3: 1976 (M), 1976.

GAGE.--Water-stage recorder. Elevation of gage is 6,730 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Feb. 4-7. Records good except for estimated daily discharges, which are poor, and the winter period, which is fair.

AVERAGE DISCHARGE.--13 years (water years 1976-81, 1983-89), 3.53 ft³/s; 2,560 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90 ft³/s, Apr. 22, 1980, gage height, 5.18 ft; no flow many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 60 ft³/s at 1845 Mar. 18, gage height, 4.40 ft; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.58	.78	.98	1.3	1.3	1.3	12	5.8	1.8	.73	.40	.23
2	.60	.78	.99	1.3	1.3	1.3	13	5.7	1.7	.59	.43	.03
3	.60	.79	1.0	1.3	1.3	1.4	13	6.7	1.8	.68	.44	.00
4	.60	.83	1.0	1.3	1.2	1.6	10	7.1	1.8	.64	.28	.00
5	.61	.83	1.2	1.3	1.0	1.8	8.5	6.3	2.0	.62	.16	.00
6	.64	.87	1.4	1.3	.90	1.4	11	5.6	1.8	.59	.00	.00
7	.60	.98	1.4	1.3	.70	1.4	19	4.8	2.1	.48	.00	.00
8	.60	.98	1.4	1.3	.77	1.4	28	4.7	2.0	.47	.00	.00
9	.65	1.0	1.3	1.3	1.0	1.4	24	4.5	2.2	.36	.00	.00
10	.76	1.1	1.3	1.3	1.0	1.4	16	4.7	1.9	.41	.00	.00
11	.78	1.6	1.1	1.3	1.1	1.3	13	4.0	1.9	.53	.00	.00
12	.79	1.4	1.1	1.3	1.1	1.3	12	4.4	2.0	1.0	.00	.20
13	.80	1.5	1.1	1.3	1.1	1.4	11	4.5	1.7	1.2	.00	.49
14	.79	1.3	1.1	1.3	1.1	2.5	11	4.0	2.0	1.1	.00	.54
15	.78	1.5	1.1	1.3	1.1	1.4	10	4.2	1.4	.90	.00	.42
16	.78	1.4	1.1	1.3	1.2	1.4	10	4.2	1.4	.72	.00	.28
17	.78	1.4	1.4	1.3	1.2	1.6	10	4.2	1.3	.60	.00	.15
18	.78	1.5	1.3	1.3	1.3	23	9.2	3.8	1.3	.48	.01	.10
19	.79	1.0	1.2	1.3	1.3	42	8.6	3.3	1.2	.41	.41	.06
20	.83	.93	1.2	1.2	1.2	28	8.0	3.0	1.2	.36	.27	.11
21	.83	1.0	1.2	1.2	1.2	22	7.6	2.8	.98	.40	.35	.20
22	.83	1.0	1.7	1.2	1.2	12	7.2	2.9	.95	.53	.34	.52
23	.83	1.2	1.0	1.2	1.2	14	6.8	3.2	1.0	.67	.06	.35
24	.83	1.2	1.0	1.2	1.3	15	6.5	2.4	1.1	.86	.00	.27
25	.83	.92	2.4	1.2	1.3	18	6.5	2.2	1.0	.86	.08	.21
26	.78	1.2	1.4	1.2	1.3	19	6.6	2.2	1.0	.77	.00	.22
27	.78	1.1	1.3	1.3	1.3	18	6.2	2.1	.93	.63	.00	.25
28	.78	1.0	1.3	1.4	1.3	19	6.2	1.8	.88	.45	.00	.24
29	.78	.98	1.4	1.4	---	18	6.0	1.8	.83	.47	.38	.19
30	.78	.98	1.4	1.4	---	14	5.6	1.8	.82	.49	.75	.16
31	.78	---	1.4	1.3	---	11	---	2.0	---	.34	.46	---
TOTAL	22.97	33.05	39.17	39.9	32.27	298.3	322.5	120.7	43.99	19.34	4.82	5.22
MEAN	.74	1.10	1.26	1.29	1.15	9.62	10.7	3.89	1.47	.62	.16	.17
MAX	.83	1.6	2.4	1.4	1.3	42	28	7.1	2.2	1.2	.75	.54
MIN	.58	.78	.98	1.2	.70	1.3	5.6	1.8	.82	.34	.00	.00
AC-FT	46	66	78	79	64	592	640	239	87	38	9.6	10

CAL YR 1988 TOTAL 1301.75 MEAN 3.56 MAX 43 MIN .02 AC-FT 2580
WTR YR 1989 TOTAL 982.23 MEAN 2.69 MAX 42 MIN .00 AC-FT 1950

09245000 ELKHEAD CREEK NEAR ELKHEAD, CO

LOCATION.--Lat 40°40'11", long 107°17'04", in NW¼NE¼ sec.8, T.8 N., R.88 W., Routt County, Hydrologic Unit 14050001, on right bank 0.2 mi upstream from North Fork Elkhead Creek, 4.5 mi northwest of Elkhead, and 12 mi north of Hayden.

DRAINAGE AREA.--64.2 mi^2.

PERIOD OF RECORD.--January to November 1910 and May to November 1920 (monthly discharge only, published in WSP 1313; published as "at Hayes Ranch"), April 1953 to current year.

REVISED RECORDS.--WSP 1733: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,845 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 30, 1920, nonrecording gage or water-stage recorder 675 ft upstream at different datum.

REMARKS.--Estimated daily discharges: Nov. 30 to Mar. 19. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--35 years (water years 1954-89), 56.8 ft^3/s; 41,150 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,850 ft^3/s, May 20, 1984, gage height, 7.58 ft, from rating curve extended above 1,500 ft^3/s, on basis of slope area determination of peak flow; no flow Sept. 1, 1954, Sept. 12-19, 24, 1955, Aug. 27-29, 1961, Aug. 14-19, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr 18	2200	*438	*5.03				

Minimum daily, 0.10 ft^3/s, Sept. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	3.2	5.0	5.7	4.5	5.4	15	81	37	6.2	2.1	.18
2	2.3	3.4	4.7	5.7	4.5	5.4	13	92	33	5.5	2.0	.19
3	2.4	4.3	4.7	5.4	4.5	5.4	12	97	31	5.0	2.5	.14
4	2.4	5.4	5.0	5.4	4.5	5.6	11	95	31	4.5	2.0	.12
5	2.5	4.6	5.2	5.4	4.5	6.1	10	93	36	4.0	1.5	.11
6	3.0	3.7	5.5	5.4	4.3	6.6	13	111	30	3.6	1.4	.13
7	3.3	3.5	5.7	5.2	4.3	6.2	29	128	36	3.3	1.2	.10
8	3.2	4.0	5.9	5.2	4.4	8.0	47	141	29	2.8	.91	.15
9	3.8	4.9	6.1	4.9	4.3	11	56	142	25	2.8	.83	.63
10	3.6	4.8	5.9	4.8	4.5	12	53	142	25	2.6	.88	1.1
11	3.3	4.9	5.9	4.8	4.5	12	50	133	30	2.4	.83	.84
12	3.2	5.9	6.0	4.8	4.5	13	60	131	23	3.2	1.3	1.3
13	3.3	4.4	6.1	4.8	4.5	11	79	111	20	4.0	4.1	1.6
14	3.3	4.3	6.5	4.8	4.5	10	111	103	18	3.5	2.7	1.4
15	3.4	5.1	6.4	4.8	4.5	11	148	105	16	2.7	1.6	1.0
16	3.5	4.7	6.4	4.8	4.5	10	209	106	15	2.3	1.1	.31
17	3.4	5.5	6.8	4.8	4.5	10	276	92	14	1.8	.95	.68
18	3.3	7.1	7.0	4.7	4.5	10	304	85	13	1.5	.91	.74
19	3.3	5.8	6.6	4.6	4.5	10	295	88	12	1.4	.97	.66
20	3.3	5.3	7.2	4.5	4.6	10	314	82	10	1.2	1.2	1.0
21	3.3	5.3	6.9	4.5	4.7	13	302	81	9.6	1.1	2.1	.84
22	3.3	5.6	6.4	4.5	4.8	8.6	267	79	9.9	1.0	2.1	.94
23	3.3	5.2	6.0	4.5	4.9	8.9	242	77	9.8	1.4	1.5	.73
24	3.3	5.0	6.0	4.6	4.9	10	233	72	10	3.0	1.0	.49
25	3.3	5.9	6.0	4.6	5.0	13	210	65	9.4	3.0	.79	.35
26	3.3	5.3	6.6	4.5	5.2	16	192	58	9.3	2.6	.57	.33
27	3.2	6.2	5.9	4.5	5.2	19	163	52	8.7	2.1	.45	.37
28	3.3	7.4	5.7	4.5	5.4	20	133	48	7.8	2.2	.31	.51
29	3.3	6.7	5.8	4.5	---	22	111	46	7.4	3.4	.30	.59
30	3.3	4.7	6.0	4.5	---	17	92	43	6.9	5.0	.25	.83
31	3.3	---	6.0	4.5	---	16	---	40	---	3.3	.22	---
TOTAL	98.4	152.1	185.9	150.2	129.5	342.2	4050	2819	572.8	92.4	40.57	18.86
MEAN	3.17	5.07	6.00	4.85	4.62	11.0	135	90.9	19.1	2.98	1.31	.63
MAX	3.8	7.4	7.2	5.7	5.4	22	314	142	37	6.2	4.1	1.6
MIN	2.3	3.2	4.7	4.5	4.3	5.4	10	40	6.9	1.0	.22	.10
AC-FT	195	302	369	298	257	679	8030	5590	1140	183	80	37

CAL YR 1988 TOTAL 18388.36 MEAN 50.2 MAX 666 MIN .68 AC-FT 36470
WTR YR 1989 TOTAL 8651.93 MEAN 23.7 MAX 314 MIN .10 AC-FT 17160

09246920 FORTIFICATION CREEK NEAR FORTIFICATION, CO

LOCATION.--Lat 40°44'38", long 107°32'25", in NW¼NW¼ sec. 18, T.9 N., R.90 W., Moffat County, Hydrologic Unit 14050001, on right bank, 4.5 mi south of Fortification.

DRAINAGE AREA.--40.0 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,520 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 11 to Mar. 27, and Sept. 13-30. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--5 years, 12.8 ft³/s; 9,270 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 465 ft³/s, March 25, 1985, gage height, 4.64 ft; no flow many days, most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 59 ft³/s at 2300 Apr. 24, gage height, 2.19 ft; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.71	1.2	1.5	1.6	1.5	1.8	7.3	6.6	4.4	.88	.62	.00
2	.66	1.3	1.5	1.6	1.5	1.8	6.3	7.3	4.4	.71	.42	.00
3	.66	1.4	1.5	1.6	1.5	1.8	6.0	7.1	16	.63	.33	.00
4	.66	1.5	1.6	1.7	1.5	1.7	5.8	6.4	15	.60	.21	.00
5	.65	1.4	1.7	1.7	1.5	1.5	4.9	7.1	22	.52	.18	.00
6	.66	1.4	1.7	1.7	1.5	1.3	5.3	12	21	.48	.14	.00
7	.66	1.4	1.7	1.7	1.4	1.4	11	18	20	.45	.09	.00
8	.66	1.4	1.6	1.8	1.4	1.5	11	21	17	.40	.06	.01
9	.67	1.7	1.5	1.8	1.4	1.7	10	19	8.0	.37	.03	.0
10	.67	1.6	1.4	1.7	1.4	2.7	9.4	25	5.4	.33	.02	.00
11	.71	1.5	1.3	1.6	1.4	4.8	8.4	19	5.5	.29	.03	1.1
12	.72	1.4	1.3	1.6	1.4	4.5	9.1	19	4.4	.26	.15	1.3
13	.76	1.4	1.3	1.6	1.4	4.7	10	13	3.8	.23	.29	.80
14	.77	1.4	1.3	1.6	1.4	4.8	14	9.9	3.4	.26	.24	.41
15	.76	1.3	1.3	1.5	1.4	4.0	17	8.2	6.4	.14	.21	.34
16	.78	1.2	1.3	1.5	1.4	3.5	17	7.5	6.1	.08	.14	.30
17	.80	1.1	1.3	1.5	1.4	3.0	21	7.6	6.1	.03	.11	.30
18	.83	1.2	1.4	1.5	1.4	2.7	25	6.9	5.7	.00	.04	.31
19	.81	1.3	1.4	1.6	1.4	3.1	25	7.6	5.2	.00	.01	.33
20	.85	1.3	1.5	1.7	1.4	2.7	28	6.8	3.8	.00	.07	.30
21	.86	1.3	1.7	1.8	1.4	2.3	31	6.9	3.9	.00	.27	.30
22	.88	1.3	1.8	1.8	1.3	2.6	29	7.3	4.2	.00	.45	.35
23	.89	1.3	1.7	1.8	1.3	2.8	34	8.4	4.3	.01	.27	.38
24	.91	1.4	1.7	1.8	1.4	2.8	37	9.0	3.8	.00	.08	.32
25	.90	1.5	1.6	1.8	1.4	3.2	30	7.0	2.5	.00	.00	.28
26	1.0	1.5	1.5	1.8	1.5	4.0	25	4.7	2.4	.00	.00	.25
27	1.0	1.5	1.5	1.8	1.6	4.4	16	4.3	2.2	.00	.00	.28
28	.99	1.6	1.5	1.8	1.7	3.1	13	3.9	1.8	.21	.00	.30
29	1.1	1.6	1.5	1.7	---	3.8	8.4	4.1	1.7	7.1	.00	.27
30	1.1	1.5	1.6	1.6	---	3.8	7.3	4.9	1.1	6.1	.00	.30
31	1.1	---	1.6	1.5	---	6.6	---	4.8	---	2.2	.00	---
TOTAL	25.18	41.9	46.8	51.8	40.2	94.4	482.2	300.3	211.5	22.28	4.46	8.53
MEAN	.81	1.40	1.51	1.67	1.44	3.05	16.1	9.69	7.05	.72	.14	.28
MAX	1.1	1.7	1.8	1.8	1.7	6.6	37	25	22	7.1	.62	1.3
MIN	.65	1.1	1.3	1.5	1.3	1.3	4.9	3.9	1.1	.00	.00	.00
AC-FT	50	83	93	103	80	187	956	596	420	44	8.8	17

CAL YR 1988 TOTAL 2822.82 MEAN 7.71 MAX 156 MIN .00 AC-FT 5600
WTR YR 1989 TOTAL 1329.55 MEAN 3.64 MAX 37 MIN .00 AC-FT 2640

09246920 FORTIFICATION CREEK NEAR FORTIFICATION, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1985 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
DEC										
06...	1230	1.7	405	7.8	0.0	11.8	150	39	12	35
APR										
19...	1055	25	150	7.9	7.0	9.6	61	17	4.4	8.3
JUN										
15...	1115	6.4	209	8.0	17.0	7.6	71	20	5.2	14
AUG										
23...	1305	0.10	575	8.6	25.0	8.3	170	42	16	62

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
DEC									
06...	1	1.3	175	43	6.8	0.2	18	260	0.35
APR									
19...	0.5	1.2	63	11	2.2	0.1	12	95	0.13
JUN									
15...	0.7	1.0	87	15	2.6	0.1	15	125	0.17
AUG									
23...	2	1.9	246	50	10	0.4	8.4	338	0.46

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC									
06...	1.19	<0.1	<0.1	0.02	0.48	0.50	0.05	0.03	4.7
APR									
19...	6.44	0.30	0.32	0.05	0.55	0.60	0.10	0.07	14
JUN									
15...	2.16	<0.1	<0.1	<0.01	--	0.40	0.07	0.06	6.0
AUG									
23...	0.09	<0.1	<0.1	<0.01	--	0.40	0.06	0.05	6.3

DATE	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ANTI-MONY, TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
DEC										
06...	210	<1	1	100	<10	1	1	<1	2	550
JUN										
15...	1900	<1	1	100	<10	<1	<1	1	5	2300

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
DEC										
06...	<5	<10	140	<0.1	<1	1	2	<1	350	<10
JUN										
15...	4	<10	100	<0.1	<1	3	<1	<1	170	<10

09246920 FORTIFICATION CREEK NEAR FORTIFICATION, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT				
06...	1258	0.63	---	14.0
24...	1230	0.90	456	13.5
DEC				
12...	1540	1.3	367	0.0
FEB				
16...	1145	1.4	206	0.0
APR				
07...	1235	11	283	8.5
20...	1308	26	149	12.5
MAY				
23...	1340	9.1	168	17.5
JUN				
22...	1658	4.6	229	19.5
JUL				
14...	1329	0.26	612	31.5
AUG				
17...	1442	0.08	580	27.0
SEP				
15...	1216	0.41	742	19.5

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC					
06...	1230	1.7	17	0.08	--
APR					
19...	1055	25	544	37	83
JUN					
15...	1115	6.4	122	2.1	79
AUG					
23...	1305	0.10	10	0.00	--

09247600 YAMPA RIVER BELOW CRAIG, CO.

LOCATION.--Lat 40°28'51", long 107°36'49", in SW¼NW¼ sec. 16, T.6 N., R.91 W., Moffat County, Hydrologic Unit 14050001, on left bank 0.5 mi downstream from state highway 13-789 bridge, and 3.3 mi southwest of Craig.

DRAINAGE AREA.--1,750 mi²

PERIOD OF RECORD.--June 1975 to September 1980 (discharge measurements only), October 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,100 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 20 to May 1. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by diversions for irrigation, transbasin diversion, storage reservoirs, and return flow from irrigated areas.

AVERAGE DISCHARGE.--5 years, 1,277 ft³/s; 925,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,300 ft³/s, May 6, 1985, gage height, 9.68 ft; minimum daily, 1.3 ft³/s, Sept. 1, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,270 ft³/s at 1330 May 30, gage height, 6.74 ft; minimum daily, 25 ft³/s, Aug. 31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	208	120	175	150	100	150	1200	2000	3120	570	216	33
2	219	121	173	155	100	165	1200	1580	2980	526	177	31
3	218	129	175	160	100	180	1100	1640	2930	458	177	35
4	194	150	155	145	105	190	1100	1720	2550	395	188	34
5	194	163	146	130	107	205	1100	1660	2380	358	171	32
6	203	159	142	115	110	230	1500	1630	2490	321	157	35
7	209	146	172	115	111	270	1940	1930	2380	286	146	29
8	211	146	146	110	110	300	1800	2420	2450	237	140	38
9	193	167	145	105	108	360	1500	3060	2530	228	127	65
10	207	182	188	100	105	450	1200	3530	2350	209	120	91
11	172	171	190	100	104	600	1100	3810	2550	193	93	126
12	150	178	194	103	102	800	1000	3830	2760	182	101	118
13	140	185	206	105	100	880	1000	3410	2480	200	147	124
14	136	183	205	105	100	980	1000	2720	2240	214	173	159
15	140	190	231	105	100	960	1100	2520	2120	191	159	166
16	140	206	206	105	105	960	1300	2240	2130	166	133	140
17	137	169	228	107	110	1000	1500	2100	2290	140	123	157
18	133	148	237	108	112	1100	1800	2090	2150	116	95	131
19	133	160	231	108	112	1000	2100	2540	1930	107	98	130
20	135	132	235	107	112	1000	2600	2860	1810	114	113	118
21	133	143	220	105	112	1000	3000	3050	1650	106	138	115
22	124	179	218	110	115	1000	3500	3060	1380	85	142	122
23	134	178	200	110	117	1000	3600	3600	1160	89	130	146
24	133	205	190	112	120	1100	3800	3570	988	155	114	143
25	128	168	180	112	125	1200	4000	3420	871	301	94	120
26	127	153	175	111	130	1300	3800	2880	806	222	105	101
27	128	189	170	110	135	1500	3500	2640	723	205	93	114
28	127	243	173	110	140	1600	3200	2890	681	180	67	123
29	131	191	170	110	---	1700	2800	3470	639	203	43	81
30	126	171	165	105	---	1600	2400	3830	610	194	30	80
31	110	---	155	102	---	1500	---	3560	---	270	25	---
TOTAL	4873	5025	5796	3535	3107	26280	61740	85260	58128	7221	3835	2937
MEAN	157	167	187	114	111	848	2058	2750	1938	233	124	97.9
MAX	219	243	237	160	140	1700	4000	3830	3120	570	216	166
MIN	110	120	142	100	100	150	1000	1580	610	85	25	29
AC-FT	9670	9970	11500	7010	6160	52130	122500	169100	115300	14320	7610	5830

CAL YR 1988 TOTAL 388595.3 MEAN 1062 MAX 8600 MIN 1.3 AC-FT 770800
WTR YR 1989 TOTAL 267737 MEAN 734 MAX 4000 MIN 25 AC-FT 531100

09249750 WILLIAMS FORK RIVER AT MOUTH NEAR HAMILTON, CO.

LOCATION.--Lat 40°26'14", Long 107°38'50", in SE¼NW¼ sec.31, T.6 N., R.91 W., Moffat County, Hydrologic Unit 14050001, on left bank at coal mine service road crossing, 2,300 ft upstream from confluence with Yampa River, and 6.1 mi north-northeast of Hamilton, Co.

DRAINAGE AREA.--419 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1984 to current year.

GAGE.--Water stage recorder. Elevation of gage is 6,170 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Feb. 2-15. Records good.

AVERAGE DISCHARGE.--5 years, 234 ft^3/s; 169,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 4,750 ft^3/s, May 16, 1984, gage height, 9.96 ft; minimum daily, 15 ft^3/s, Aug. 31, 1988, and Sept. 9, 1989.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 11	1000	*997	*5.41				

Minimum daily, 15 ft^3/s, Sept. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	44	60	56	47	56	103	322	451	82	64	36
2	46	43	57	55	50	54	114	302	409	78	73	34
3	46	46	58	55	44	55	102	296	370	70	61	30
4	45	53	59	59	45	52	98	306	335	62	55	27
5	48	51	59	52	44	39	88	309	365	58	52	26
6	44	45	57	54	43	33	87	356	363	56	50	23
7	42	43	58	61	43	44	118	515	338	53	47	22
8	44	48	61	66	43	54	181	667	314	48	45	21
9	45	55	59	59	43	73	223	802	317	44	47	15
10	45	52	54	50	43	107	189	844	302	39	48	23
11	47	56	61	52	43	142	159	914	316	43	66	24
12	47	60	60	62	42	153	148	859	327	75	87	25
13	47	52	62	54	43	158	140	685	309	79	79	32
14	47	58	58	54	44	148	153	550	280	61	63	40
15	48	63	59	52	42	93	188	501	259	52	57	36
16	47	48	62	49	42	99	239	449	250	45	51	35
17	46	40	61	51	40	123	295	442	264	42	49	31
18	46	56	57	51	40	104	408	439	273	39	51	29
19	47	49	57	55	39	103	479	574	241	37	60	28
20	48	46	58	64	39	106	503	631	222	35	71	29
21	47	46	63	65	37	88	605	678	207	34	63	35
22	46	54	61	66	37	77	610	621	192	48	56	42
23	45	64	64	61	37	81	641	697	178	125	55	37
24	45	69	64	60	38	84	736	730	168	103	52	34
25	45	51	58	62	42	98	736	637	158	64	47	32
26	44	60	58	62	43	120	735	505	145	56	45	32
27	44	52	58	61	46	125	624	466	132	54	45	32
28	44	48	55	60	52	118	507	515	122	82	42	33
29	43	42	54	55	---	118	424	573	107	102	41	31
30	45	60	54	48	---	130	362	601	92	80	38	29
31	46	---	55	48	---	107	---	536	---	61	36	---
TOTAL	1416	1554	1821	1759	1191	2942	9995	17322	7806	1907	1696	903
MEAN	45.7	51.8	58.7	56.7	42.5	94.9	333	559	260	61.5	54.7	30.1
MAX	48	69	64	66	52	158	736	914	451	125	87	42
MIN	42	40	54	48	37	33	87	296	92	34	36	15
AC-FT	2810	3080	3610	3490	2360	5840	19830	34360	15480	3780	3360	1790

CAL YR 1988 TOTAL 71167 MEAN 194 MAX 1740 MIN 15 AC-FT 141200
WTR YR 1989 TOTAL 50312 MEAN 138 MAX 914 MIN 15 AC-FT 99790

09249750 WILLIAMS FORK AT MOUTH NEAR HAMILTON, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1975 to September 1980, December 1985 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
DEC 06...	1455	47	613	8.5	0.0	11.8	300	63	34
JUN 15...	1345	265	348	8.4	18.0	8.1	150	35	15

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
DEC 06...	26	0.7	1.8	199	140	5.2	0.1	14	403
JUN 15...	11	0.4	1.1	118	54	2.1	0.1	12	201

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
DEC 06...	0.55	51.2	<0.01	<0.1	<0.01	0.30	<0.01	<0.01
JUN 15...	0.27	144	<0.01	<0.1	<0.01	0.20	0.01	<0.01

DATE	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ANTI-MONY, TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
DEC 06...	100	<1	<1	100	<10	<1	1	1	2	280
JUN 15...	570	<1	<1	100	<10	<1	<1	4	4	920

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
DEC 06...	<5	20	30	<0.1	<1	6	1	<1	460	<10
JUN 15...	3	<10	30	<0.1	<1	2	<1	<1	230	<10

09249750 WILLIAMS FORK AT MOUTH NEAR HAMILTON, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT				
14...	1310	48	569	11.0
NOV				
10...	1115	54	619	5.0
DEC				
19...	1102	56	633	0.5
FEB				
03...	1115	44	216	0.5
APR				
10...	1515	188	521	8.0
MAY				
09...	1135	870	218	10.5
24...	0955	803	191	11.0
JUL				
11...	1445	43	--	20.5
AUG				
23...	1417	53	593	21.5
SEP				
14...	1434	41	665	16.5

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC					
06...	1455	47	26	3.3	--
JUN					
15...	1345	265	32	23	78

09250507 WILSON CREEK ABOVE TAYLOR CREEK, NEAR AXIAL, CO

LOCATION.--Lat 40°18'53", long 107°47'58", in NW¼SW¼ sec.14, T.4 N., R.93 W., Moffatt County, Hydrologic Unit 14050002, on left bank about 200 ft upstream from Moffat County Road 17, about 50 ft upstream from confluence of Taylor Creek, and 2.4 mi north of Axial.

DRAINAGE AREA.--20.0 mi².

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,315 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-5, Oct. 30 to Nov. 7, Nov. 9 to Mar. 9, and Mar. 17 to Apr. 24. Records fair. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--9 years, 5.65 ft³/s; 4,090 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 352 ft³/s, May 14, 1984, gage height, 8.71 ft, on basis of indirect measurement of peak flow; no flow, June 5, July 4-9, and Aug. 2-3, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 17 ft³/s, March 18; no flow, June 5, July 4-9, and Aug. 2-3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80	.68	.94	1.0	.74	2.7	7.0	2.4	.11	.04	.07	1.1
2	.78	.64	.92	1.0	.76	2.7	7.8	2.4	.07	.04	.00	1.1
3	.75	.74	.94	1.0	.80	2.7	7.2	2.8	.07	.07	.00	1.2
4	.75	.80	.94	.98	.78	2.5	7.3	2.6	.07	.00	.25	1.2
5	.90	.86	.92	.96	.78	2.2	6.8	2.4	.00	.00	.70	1.5
6	1.1	.94	.90	.92	.78	2.3	9.0	2.1	.11	.00	.94	1.5
7	1.1	1.0	.90	.90	.78	2.4	10	2.2	.04	.00	.86	1.5
8	1.1	1.4	.90	.90	.78	2.5	11	1.9	.15	.00	.86	1.4
9	1.2	1.2	.89	.90	.78	2.5	11	2.4	.06	.00	1.0	1.1
10	1.1	1.0	.88	.90	.78	2.5	9.9	.78	.11	.07	.65	.78
11	1.1	1.1	.88	.90	.78	2.4	8.9	.70	.20	.11	.65	.57
12	1.1	.95	.90	.90	.78	2.1	10	.70	.20	.15	1.4	1.0
13	1.1	.85	.92	.90	.80	1.9	11	.70	.32	.11	.94	.86
14	1.2	.70	.95	.90	.80	2.0	13	.86	.39	.07	1.1	.78
15	1.2	.70	.95	.86	.80	3.0	15	.78	.25	.07	.78	.86
16	1.1	.85	.95	.85	.80	15	7.0	.78	.25	.11	1.4	.65
17	1.1	.88	.95	.82	.80	16	3.5	.86	.39	.04	.94	.94
18	1.1	.92	.95	.80	.80	17	2.0	.86	.32	.15	1.6	1.0
19	1.1	.95	.97	.80	.80	15	1.9	.78	.57	.15	1.4	.57
20	1.2	1.0	1.0	.78	.80	10	1.8	.78	.39	.15	1.9	.50
21	1.1	1.0	1.0	.78	.80	7.9	1.9	.78	.44	.20	1.6	.57
22	1.1	.95	1.1	.76	.80	4.5	2.0	.70	.32	.25	1.1	.44
23	1.0	.90	1.0	.76	.83	3.8	2.0	.78	.50	.32	1.1	.57
24	1.0	.80	1.0	.74	.98	3.5	1.8	.50	.44	.25	1.1	.50
25	1.0	.90	.98	.76	1.5	3.3	1.6	.44	.39	.20	1.1	.57
26	1.1	.95	.98	.78	2.2	4.0	2.1	.39	.32	.20	1.3	.70
27	1.0	.98	.96	.78	2.4	4.5	2.2	.39	.25	.39	.86	.86
28	.87	1.0	.96	.76	2.5	3.8	2.2	.32	.20	.04	.86	.75
29	.98	1.0	.96	.74	---	3.5	1.9	.20	.11	.25	.94	.70
30	.85	.95	.98	.74	---	4.5	2.6	.11	.15	.20	1.1	.86
31	.70	---	1.0	.74	---	5.5	---	.04	---	.04	1.1	---
TOTAL	31.55	27.59	29.47	26.31	27.73	161.9	181.3	34.43	7.17	3.67	29.50	26.66
MEAN	1.02	.92	.95	.85	.99	5.22	6.04	1.11	.24	.12	.95	.89
MAX	1.2	1.4	1.1	1.0	2.5	17	15	2.8	.57	.39	1.9	1.5
MIN	.70	.64	.88	.74	.74	1.9	1.6	.04	.00	.00	.00	.44
AC-FT	63	55	58	52	55	321	360	68	14	7.3	59	53

CAL YR 1988 TOTAL 804.92 MEAN 2.20 MAX 15 MIN .12 AC-FT 1600
WTR YR 1989 TOTAL 587.28 MEAN 1.61 MAX 17 MIN .00 AC-FT 1160

09250510 TAYLOR CREEK AT MOUTH, NEAR AXIAL, CO

LOCATION.--Lat 40°18'48", long 107°47'57", in NW¼SW¼ sec.14, T.4 N., R.93 W., Moffatt County, Hydrologic Unit 14050002, on right bank 475 ft upstream from confluence with Wilson Creek, about 1,000 ft southwest of Gossard ranch house, and 2 mi north of Axial.

DRAINAGE AREA.--7.22 mi².

REVISED RECORDS.--WDR CO-87-2: 1986 (M).

PERIOD OF RECORD.--Streamflow records, July 1975 to current year. Water-quality data available, July 1975 to September 1981.

GAGE.--Water-stage recorder. Elevation of gage is 6,300 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Mar. 28, 1980, gage 25 ft upstream at datum 1.00 ft, higher, Mar. 28, 1980 to Apr. 1, 1985 at same site at datum 1.08 ft, higher, Apr. 1, 1985 to Sept. 17, 1986 at same site at datum 1.00 ft, higher.

REMARKS.--Estimated daily discharges: Dec. 1 to Feb. 27, June 8-11, and July 27 to Sept. 19. Records fair except for estimated daily discharges, which are poor. No diversions upstream from station. Low dam to prevent erosion, 75 ft upstream. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--14 years, 0.59 ft³/s; 427 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41 ft³/s, May 15, 1984, gage height, 3.33 ft, present datum; no flow many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9.3 ft³/s at 1545 July 27, gage height, 1.93 ft; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	.02	.05	.00	.00	.11	.14	.00	.00	.00	.01	.01
2	.13	.02	.04	.00	.00	.12	.08	.00	.00	.00	.00	.02
3	.13	.02	.02	.00	.00	.12	.11	.00	.00	.00	.00	.00
4	.13	.02	.01	.00	.00	.11	.06	.00	.00	.00	.00	.00
5	.10	.01	.00	.00	.00	.11	.10	.00	.00	.00	.00	.00
6	.18	.01	.00	.00	.00	.12	.11	.00	.09	.00	.00	.00
7	.17	.01	.00	.00	.00	.12	.16	.00	.13	.00	.00	.06
8	.18	.04	.00	.00	.00	.12	.15	.00	.00	.00	.00	.02
9	.19	.08	.00	.00	.00	.12	.19	.00	.00	.00	.00	.01
10	.15	.02	.00	.00	.00	.12	.19	.00	.00	.00	.00	.00
11	.14	.07	.00	.00	.00	.12	.23	.00	.00	.00	.00	[illegible]
12	.16	.03	.00	.00	.00	.12	.29	.00	.00	.00	.00	.02
13	.12	.02	.00	.00	.00	.11	.18	.00	.00	.00	.00	.01
14	.15	.02	.00	.00	.00	.10	.03	.00	.00	.01	.01	.00
15	.19	.05	.00	.00	.00	.10	.01	.00	.00	.00	.00	.00
16	.13	.05	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00
17	.15	.07	.00	.00	.00	.10	.00	.00	.05	.01	.00	.02
18	.04	.06	.00	.00	.00	.10	.01	.00	.07	.12	.00	.07
19	.04	.09	.00	.00	.00	.12	[illegible]	.00	.03	.00	.00	.00
20	.04	.13	.00	.00	.00	.12	.00	.00	.00	.00	.00	.01
21	.04	.12	.00	.00	.00	.12	.05	.00	.00	.00	.00	[illegible]
22	.03	.11	.00	.00	.00	.12	.09	.00	.07	.00	.01	[illegible]
23	.03	.09	.00	.00	.00	.06	.05	.00	.00	.00	.01	[illegible]
24	.04	.04	.00	.00	.01	.03	.03	.00	.03	.00	.04	[illegible]
25	.04	.04	.00	.00	.04	.00	.01	.00	.01	.11	.00	[illegible]
26	.03	.08	.00	.00	.06	.00	.00	.00	.00	.00	.00	.00
27	.03	.09	.00	.00	.10	.01	.00	.00	.00	.29	.00	.00
28	.03	.10	.00	.00	.11	.01	.00	.00	.00	.00	.00	.00
29	.02	.10	.00	.00	---	.04	.00	.00	.02	.16	.00	.00
30	.03	.09	.00	.00	---	.07	.00	.00	.01	.38	.00	.00
31	.02	---	.00	.00	---	.07	---	.00	---	.10	.00	---
TOTAL	3.02	1.73	0.12	0.00	0.32	2.76	2.27	0.00	[illegible]	1.62	0.06	[illegible]
MEAN	.097	.057	.004	.00	.011	.089	.076	.00	[illegible]	.052	.002	.004
MAX	.19	.13	.05	.00	.11	.12	.29	.00	.13	.38	.04	[illegible]
MIN	.02	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	6.0	3.4	.2	.0	.6	5.5	4.5	.0	[illegible]	[illegible]	.1	.2

CAL YR 1988 TOTAL 40.60 MEAN .11 MAX .71 MIN .00 AC-FT 81
WTR YR 1989 TOTAL 11.16 MEAN .031 MAX .39 MIN .00 AC-FT 22

09251000 YAMPA RIVER NEAR MAYBELL, CO

LOCATION.--Lat 40°30'10", long 108°01'45", in NW¼ sec.2, T.6 N., R.95 W., Moffat County, Hydrologic Unit 14050002, on left bank 100 ft downstream from bridge on U.S. Highway 40, 2.0 mi downstream from Lay Creek, and 3.0 mi east of Maybell.

DRAINAGE AREA.--3,410 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1904 to October 1905, June 1910 to November 1912, April 1916 to current year. Monthly discharge only for some periods, published in WSP 1313. No winter records prior to 1917.

GAGE.--Water-stage recorder. Datum of gage is 5,900.23 ft above National Geodetic Vertical Datum of 1929. See WSP 1733 for history of changes prior to Mar. 9, 1937.

REMARKS.--Estimated daily discharges: Dec. 24 to Mar. 14, and Aug. 29 to Sept. 6. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transbasin diversions, numerous storage reservoirs, and diversions upstream from station for irrigation of about 65,000 acres upstream from, and about 800 acres downstream from station.

AVERAGE DISCHARGE.--73 years (water years 1917-89), 1,574 ft³/s; 1,140,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,100 ft³/s, May 17, 1984, gage height, 12.42 ft; minimum daily, 2.0 ft³/s, July 17-19, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 13	0230	*4,940	*6.05				

Minimum daily discharge, 25 ft³/s, Sept. 10-11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	238	165	275	245	155	300	1250	2200	3790	577	371	35
2	249	167	256	240	160	320	1280	1960	3390	543	309	33
3	259	174	264	240	165	330	1310	1910	3360	510	239	37
4	265	180	290	230	165	320	1290	2010	3240	435	234	36
5	245	207	261	220	165	310	1130	2040	2850	368	240	35
6	242	224	231	200	160	270	977	1970	2770	336	218	35
7	244	220	245	190	155	250	993	2200	2900	328	189	41
8	249	209	218	195	155	325	1930	2870	2700	296	165	32
9	256	217	216	180	155	390	2330	3650	2900	251	142	31
10	241	243	298	175	160	500	2040	4230	2790	223	139	25
11	250	262	327	170	165	700	1590	4690	2730	221	143	25
12	238	259	335	170	170	900	1440	4720	3020	231	107	38
13	204	258	308	170	170	1050	1380	4610	3030	236	106	75
14	196	260	297	170	175	1150	1430	3630	2650	263	186	127
15	190	268	273	175	178	1130	1560	3270	2430	291	221	161
16	191	278	269	180	178	1080	1850	2960	2320	225	199	162
17	192	261	289	180	178	1190	2260	2760	2390	195	166	136
18	192	237	293	180	178	1190	2740	2610	2600	156	144	131
19	187	216	303	180	180	1170	3260	2780	2200	129	138	117
20	186	224	298	180	185	1120	3450	3530	2020	111	134	109
21	189	200	284	180	190	1160	3800	3660	1910	113	166	109
22	191	182	300	180	195	1110	4140	3880	1740	110	185	106
23	181	235	291	185	195	1080	4100	3850	1450	109	193	125
24	179	260	300	190	200	1200	4150	4400	1260	213	162	147
25	186	300	295	190	215	1290	4430	4160	1090	264	148	147
26	181	238	270	190	240	1680	4370	3750	997	424	132	129
27	177	175	280	185	260	1850	4200	3090	878	310	127	113
28	178	164	270	185	285	1770	3740	3140	778	286	131	118
29	178	232	265	180	---	1670	3060	3620	727	301	45	123
30	179	279	260	170	---	1980	2570	4200	636	807	35	91
31	187	---	255	160	---	1550	---	4270	---	352	31	---
TOTAL	6520	6794	8616	5865	5132	30335	74050	102620	67546	9214	5145	2629
MEAN	210	226	278	189	183	979	2468	3310	2252	297	166	87.6
MAX	265	300	335	245	285	1980	4430	4720	3790	807	371	162
MIN	177	164	216	160	155	250	977	1910	636	109	31	25
AC-FT	12930	13480	17090	11630	10180	60170	146900	203500	134000	18280	10210	5210

CAL YR 1988 TOTAL 460463 MEAN 1258 MAX 9800 MIN 37 AC-FT 913300
WTR YR 1989 TOTAL 324466 MEAN 889 MAX 4720 MIN 25 AC-FT 643600

09251000 YAMPA RIVER NEAR MAYBELL, CO--Continued
(National Stream-Quality Accounting Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1950 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1950 to August 1973, July 1975 to current year.
WATER TEMPERATURES: November 1950 to August 1973, July 1975 to current year.
SUSPENDED-SEDIMENT DISCHARGE: December 1950 to May 1958, October 1975 to September 1976, October 1977 to September 1978, October 1981 to September 1982.

INSTRUMENTATION:--Water-quality monitor since July 1975.

REMARKS.--Unpublished maximum and minimum specific conductance data for period of daily record available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1260 microsiemens Nov. 17, 1985; minimum, 89 microsiemens June 27, 1983.
WATER TEMPERATURES: Maximum, 33.0°C Aug. 29, 1976; minimum, freezing point on many days during winter months each year.
SEDIMENT CONCENTRATIONS: Maximum daily, 6,180 mg/l, Aug. 16, 1981; minimum daily, 1 mg/l, several days during December 1975 to February 1976, Jan. 6, 1980.
SEDIMENT LOADS: Maximum daily, 47,100 tons May 9, 1958; minimum daily, 0.04 ton Oct. 2,3, 1982

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, not determined; minimum, 130 microsiemens May 31.
WATER TEMPERATURES: Maximum, 26.3°C July 21; minimum, freezing point on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATF	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
NOV												
16...	1100	290	700	8.6	1.5	3.5	11.2	K3	K8	270	52	35
MAR												
22...	1215	1150	905	8.3	4.0	52	10.6	K17	1500	320	62	41
MAY												
17...	1245	2790	255	8.1	12.0	19	8.7	K19	23	98	23	9.9
AUG												
15...	1120	235	602	8.7	20.0	31	7.9	82	110	190	39	23

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
NOV											
16...	54	1	2.9	152	25	166	190	18	0.2	4.2	465
MAR											
22...	78	2	3.9	189	--	155	310	20	0.2	10	651
MAY											
17...	14	0.6	1.4	70	--	58	49	3.7	0.1	9.5	144
AUG											
15...	52	2	2.7	154	13	149	130	13	0.3	2.6	387

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)
NOV											
16...	455	0.63	364	--	<0.01	<0.1	<0.01	<0.01	--	0.30	0.02
MAR											
22...	618	0.89	2020	1.59	0.01	1.60	0.08	0.06	0.82	0.90	0.20
MAY											
17...	150	0.20	1080	--	<0.01	0.11	0.03	0.01	0.47	0.50	0.04
AUG											
15...	359	0.53	246	--	<0.01	<0.1	0.02	<0.01	0.48	0.50	0.02

09251000 YAMPA RIVER NEAR MAYBELL, CO--Continued
(National Stream-Quality Accounting Network Station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
NOV											
16...	<0.01	<0.01	<10	<1	46	<0.5	<1	<1	<3	1	26
MAR											
22...	0.04	0.03	10	<1	58	<0.5	<1	1	<3	2	33
MAY											
17...	0.02	<0.01	30	<1	32	<0.5	<1	<1	<3	4	87
AUG											
15...	0.03	<0.01	10	1	56	<0.5	<1	<1	<3	3	12

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV											
16...	<5	35	8	<0.1	<10	2	1	<1.0	460	<6	7
MAR											
22...	<5	37	18	<0.1	<10	7	7	<1.0	620	<6	<3
MAY											
17...	2	9	5	<0.1	<10	3	<1	<1.0	180	<6	9
AUG											
15...	1	27	3	<0.1	<10	<1	<1	<1.0	350	<6	6

CROSS SECTION PROFILES, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SAMPLE LOCAT. X-SECT. LOOKING UPSTRM. (FT FM R BANK)	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK)	PERCENT OF DIS-CHARGE IN CROSS SECTION	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	SEDI-MENT, SUS-PENDED (MG/L)
NOV									
16...	1110	150	--	12	703	8.6	2.0	11.2	1
16...	1111	120	--	23	702	8.6	1.5	11.2	5
16...	1112	90.0	--	23	699	8.6	1.5	11.2	5
16...	1113	60.0	--	25	698	8.6	1.5	11.2	4
16...	1114	30.0	--	17	696	8.5	1.5	11.2	7
MAR									
22...	1145	170	--	2	943	8.3	4.5	10.5	107
22...	1147	140	--	17	922	8.3	4.0	10.6	123
22...	1149	110	--	21	909	8.3	4.0	10.6	110
22...	1151	80.0	--	24	900	8.3	4.0	10.6	114
22...	1153	50.0	--	20	893	8.3	4.0	10.6	102
22...	1155	30.0	--	14	892	8.3	4.0	10.5	190
MAY									
17...	1251	--	210	10	258	8.1	12.0	8.7	108
17...	1252	--	150	30	256	8.1	12.0	8.7	160
17...	1253	--	90.0	30	255	8.1	12.0	8.7	96
17...	1254	--	30.0	30	254	8.1	12.0	8.9	75
AUG									
15...	1140	30.0	--	21	601	8.7	20.0	7.8	58
15...	1142	60.0	--	34	602	8.7	20.0	7.7	39
15...	1144	100	--	34	602	8.7	20.0	8.0	37
15...	1146	140	--	11	606	8.7	20.5	8.2	35

09251000 YAMPA RIVER NEAR MAYBELL, CO--Continued
(National Stream-Quality Accounting Network Station)

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
02...	1430	249	9	6.1
11...	1310	253	4	2.7
19...	1740	189	4	2.0
27...	1815	180	3	1.5
NOV				
01...	1645	154	4	1.7
10...	1730	262	696	492
16...	1100	290	4	3.1
20...	1015	217	10	5.9
27...	1245	186	16	8.0
DEC				
05...	1330	314	13	11
11...	1445	282	14	11
18...	1330	201	10	5.4
JAN				
08...	1220	195	28	15
14...	1630	170	10	4.6
22...	1700	180	20	9.7
30...	1720	170	24	11
FEB				
12...	1455	170	7	3.2
19...	1515	180	1	0.49
MAR				
05...	1012	310	22	18
15...	1745	1020	510	1400
26...	1245	1670	4	18
APR				
01...	1400	1200	109	352
09...	0745	2650	908	6960
16...	1615	1870	161	813
23...	0840	4160	823	9240
30...	1905	2540	180	1230
MAY				
07...	1735	2250	113	685
15...	1500	3280	141	1250
21...	0655	3750	203	2050
29...	0640	3590	160	1550
JUN				
05...	1930	2830	48	367
11...	1015	2800	39	295
18...	0830	2820	77	586
25...	0830	1090	27	79
30...	1424	632	26	44
JUL				
02...	0835	560	14	21
09...	1605	249	11	7.4
23...	0930	98	13	3.4
30...	1000	970	4100	10700
AUG				
06...	1010	217	63	37
13...	1430	103	19	5.3
20...	1300	124	21	7.0
28...	1808	116	15	4.7
SEP				
04...	1110	36	9	0.87
13...	1020	113	28	8.5
17...	1715	131	15	5.3
24...	0740	139	18	6.8

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC					
15...	1300	248	11	7.4	47
FEB					
15...	1430	178	44	21	69
MAR					
22...	1215	1150	128	397	93
APR					
12...	1505	1570	183	776	84
MAY					
09...	1530	3830	653	6750	54
17...	1245	2790	103	776	90
AUG					
15...	1120	233	43	27	98

09251000 YAMPA RIVER NEAR MAYBELL, CO--Continued
(National Stream-Quality Accounting Network Station)

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	591	709	791	742	738	757	---	---	148	323	535	---
2	582	710	---	723	730	786	---	---	160	329	---	---
3	576	707	---	700	710	815	---	---	163	337	---	---
4	570	721	---	689	704	851	---	---	164	348	---	---
5	567	721	---	688	718	844	---	---	178	365	---	---
6	562	723	---	693	724	802	---	---	200	383	---	---
7	567	704	---	689	744	876	---	---	197	397	---	---
8	566	691	---	697	760	860	---	273	199	414	---	---
9	564	676	---	708	776	681	---	235	197	429	---	---
10	560	694	---	719	788	703	---	---	193	439	---	---
11	561	701	---	716	802	779	---	---	198	453	---	---
12	574	722	---	719	788	833	542	---	198	468	---	---
13	576	709	---	723	755	---	554	---	182	476	---	---
14	578	720	---	724	740	---	553	---	188	492	---	---
15	596	738	---	726	751	---	546	211	196	511	---	---
16	611	710	---	727	754	---	517	229	194	534	---	---
17	624	695	---	735	755	---	441	251	191	545	---	---
18	631	709	---	728	755	---	391	267	177	544	---	---
19	635	722	739	730	761	---	353	265	172	552	---	---
20	638	741	730	739	755	---	314	222	186	565	---	---
21	651	761	724	739	737	---	300	197	190	584	---	---
22	655	766	717	738	727	---	277	187	189	597	---	---
23	670	763	707	730	736	---	264	185	204	606	---	---
24	709	757	702	721	746	---	251	170	230	602	---	---
25	671	761	704	717	758	---	236	168	253	574	---	---
26	675	742	---	714	748	---	222	169	278	605	---	---
27	685	750	---	720	747	---	219	186	291	532	---	---
28	680	757	---	725	736	---	222	187	299	464	---	---
29	701	739	---	741	---	---	232	171	309	439	---	---
30	710	786	711	744	---	---	250	155	317	494	---	---
31	713	---	725	737	---	---	---	146	---	538	---	---

09251000 YAMPA RIVER NEAR MAYBELL, CO--Continued
(National Stream-Quality Accounting Network Station)

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.1	10.4	9.1	6.1	.6	.3	.1	.1	.3	.1	.2	.1
2	15.6	11.2	8.5	6.0	.6	.3	.1	.1	.2	.1	.2	.1
3	15.7	11.6	8.4	6.7	.8	.3	.1	.1	.1	.1	.2	.1
4	15.4	12.3	8.1	5.1	.8	.3	.1	.1	.2	.1	.2	.1
5	15.9	11.8	7.7	4.3	.7	.3	.1	.0	.2	.0	.2	.1
6	15.8	11.8	7.2	4.4	.6	.3	.1	.0	.2	.1	.2	.1
7	14.0	11.4	7.4	4.3	.6	.3	.1	.0	.2	.1	.2	.1
8	14.7	10.6	5.3	4.4	.5	.3	.1	.0	.2	.1	.3	.1
9	12.9	10.3	4.6	3.2	.6	.3	.1	.0	.2	.1	.4	.1
10	12.9	8.4	4.6	2.8	.6	.3	.1	.0	.2	.1	.2	.1
11	13.1	8.7	3.9	2.4	.5	.3	.1	.1	.2	.1	.3	.1
12	12.0	8.9	3.9	1.2	.5	.3	.1	.0	.2	.1	.3	.1
13	13.4	9.1	4.9	2.8	.6	.3	.1	.0	.2	.1	---	---
14	13.9	9.8	5.2	3.4	.4	.3	.1	.0	.2	.1	---	---
15	14.1	10.1	4.0	2.0	.5	.1	.1	.1	.3	.1	---	---
16	13.8	9.6	3.2	1.2	.4	.1	.2	.1	.2	.1	---	---
17	14.0	9.7	2.4	1.1	.1	.1	.2	.1	.2	.1	---	---
18	15.1	11.3	1.7	.1	.4	.1	.2	.1	.2	.1	---	---
19	13.4	10.2	1.4	.1	.2	.1	.2	.1	.3	.1	---	---
20	13.1	8.8	1.8	.1	.4	.1	.2	.1	.2	.2	---	---
21	12.5	8.5	1.7	.3	.2	.1	.2	.1	.2	.1	---	---
22	11.4	8.2	2.1	.3	.2	.1	.2	.1	.2	.1	---	---
23	11.6	7.2	3.2	.4	.2	.1	.2	.1	.2	.2	---	---
24	11.5	7.4	3.0	1.2	.2	.1	.2	.1	.2	.2	---	---
25	11.4	7.4	2.0	.3	.2	.1	.2	.1	.2	.1	---	---
26	11.1	7.2	1.4	.3	---	---	.2	.1	.2	.1	---	---
27	11.0	7.4	.9	.3	---	---	.2	.1	.2	.1	---	---
28	10.8	6.9	.7	.3	---	---	.2	.1	.3	.1	---	---
29	10.2	7.6	.5	.3	---	---	.2	.1	---	---	---	---
30	11.1	7.1	.9	.3	.2	.1	.2	.1	---	---	---	---
31	10.5	6.7	---	---	.2	.1	.2	.1	---	---	---	---
MONTH	15.9	6.7	9.1	.1	---	---	.2	.0	.3	.0	---	---

DAY												
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	14.4	11.9	21.2	16.3	22.5	21.1	20.1	13.7
2	---	---	---	---	15.3	12.5	22.2	17.1	22.9	20.0	20.4	14.1
3	---	---	---	---	14.8	12.9	23.0	18.1	23.2	19.0	19.6	13.6
4	---	---	---	---	14.4	11.7	23.5	19.2	22.1	18.7	20.8	12.9
5	---	---	---	---	15.1	11.8	23.8	18.3	22.5	18.2	20.2	13.5
6	---	---	---	---	14.7	13.4	24.5	18.8	23.7	18.1	19.9	14.7
7	---	---	---	---	15.9	11.9	25.2	20.3	24.1	18.1	19.3	14.6
8	---	---	13.5	13.0	15.2	13.9	24.7	20.4	23.7	18.2	16.9	14.4
9	---	---	14.1	12.3	16.7	13.2	24.9	19.5	21.5	18.9	19.2	13.1
10	---	---	---	---	16.0	14.1	24.4	19.8	23.0	17.2	19.0	13.7
11	---	---	---	---	17.0	13.6	23.0	18.8	22.1	17.6	15.4	12.3
12	---	---	---	---	16.7	14.1	22.6	19.0	22.0	17.7	14.1	10.9
13	11.2	7.1	---	---	16.8	14.2	23.7	18.4	24.3	16.2	16.2	9.9
14	12.5	8.5	---	---	17.7	14.2	24.2	18.9	21.0	17.4	16.5	10.5
15	11.7	10.9	---	---	18.6	15.1	23.7	19.2	22.2	15.4	16.4	12.3
16	12.3	10.3	10.4	8.6	18.9	16.2	23.4	17.8	22.1	17.3	17.2	11.3
17	12.6	10.8	13.1	9.4	19.1	15.7	23.7	15.3	20.8	17.4	18.4	13.2
18	12.6	10.3	14.5	11.0	19.6	16.5	24.5	16.0	21.3	16.7	18.5	14.0
19	12.2	10.0	14.9	12.0	19.7	16.8	25.7	16.2	20.7	15.9	17.8	14.1
20	12.7	10.0	14.2	11.6	18.4	16.7	25.1	17.3	20.4	15.1	17.3	14.5
21	11.8	10.4	13.9	11.9	16.9	14.0	26.3	17.4	20.1	15.2	17.3	13.1
22	11.1	9.3	14.2	11.8	16.8	13.6	25.6	19.3	20.6	15.4	17.9	11.9
23	11.6	8.9	14.4	12.1	16.0	14.0	25.4	19.3	20.9	16.2	17.6	12.4
24	11.5	9.1	12.9	11.7	17.3	12.9	24.9	18.5	19.6	16.1	17.4	12.7
25	11.3	9.6	12.6	10.8	18.6	14.9	24.4	18.5	19.7	14.8	17.6	13.2
26	10.6	9.3	13.2	11.0	19.7	15.4	22.9	19.0	20.3	13.9	15.7	13.1
27	9.6	8.3	14.2	11.2	20.0	15.9	22.4	20.4	20.1	14.0	17.1	12.9
28	9.4	7.0	14.7	11.8	20.1	17.0	24.1	19.5	20.3	14.2	17.9	12.9
29	8.2	6.4	14.9	12.8	20.6	16.9	23.6	20.2	21.9	13.2	17.7	13.4
30	9.3	6.4	14.6	13.1	22.2	17.5	21.7	17.9	20.6	14.2	17.7	12.9
31	---	---	14.0	12.1	---	---	23.7	19.8	20.4	14.5	---	---
MONTH	---	---	---	---	22.2	11.7	26.3	15.3	24.3	13.2	20.8	9.9

09253000 LITTLE SNAKE RIVER NEAR SLATER, CO

LOCATION.--Lat 40°59'58", long 107°08'34", in SW¼NW¼ sec.15, T.12 N., R.87 W., Routt County, Hydrologic Unit 14050003, on left bank just downstream from highway bridge at Focus Ranch, 0.2 mi downstream from Spring Creek, and 12 mi east of Slater.

DRAINAGE AREA.--285 mi².

PERIOD OF RECORD.--October 1942 to September 1947, October 1950 to current year.

REVISED RECORDS.--WSP 1733: 1960.

GAGE.--Water-stage recorder. Datum of gage is 6,831.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 11 to Mar. 4. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 2,000 acres upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--44 years, 234 ft³/s; 169,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,780 ft³/s, May 23, 1984, gage height, 8.78 ft, maximum gage height, 8.9[illegible] ft, Apr. [illegible], 1974; minimum daily discharge, 4.2 ft³/s, Sept. 9, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
[illegible]	[illegible]	*1,[illegible]	*[illegible].[illegible]2				

[illegible] daily, [illegible] ft³/s, Sept. [illegible].

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

[illegible]

09255000 SLATER FORK NEAR SLATER, CO

LOCATION.--Lat 40°58'57", long 107°22'56", in SW¼NE¼ sec.21, T.12 N., R.89 W., Moffat County, Hydrologic Unit 14050003, on right bank 15 ft downstream from highway bridge, 1.0 mi upstream from mouth, and 1.5 mi south of Slater.

DRAINAGE AREA.--161 mi².

PERIOD OF RECORD.--May to October, December 1910, March to October 1911, and April to May 1912 (published as Slater Creek), July 1931 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 618: 1910-11. WSP 764: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,600 ft, from river-profile map. May 28, 1910, to May 25, 1912, nonrecording gage at site 1.5 mi upstream at different datum. July 9, 1931, to May 6, 1932, nonrecording gage at site 0.2 mi downstream at different datum.

REMARKS.-Estimated daily discharges: Nov. 17 to Dec. 25, Jan. 10-13, and Jan. 28 to Mar. 9. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 500 acres upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--58 years (water years 1932-89), 77.9 ft³/s; [illegible] acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, [illegible] ft³/s May [illegible], [illegible], gage height, 11.78 ft (from floodmark), from rating curve extended above 1,000 ft³/s; no flow Aug. [illegible], [illegible], Aug. [illegible], [illegible], Aug. 29 to Sept. 3, 1954, Aug. 3, 4, 15, 16, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of [illegible] ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. [illegible]	[illegible]	*[illegible]	*[illegible]	No other peak greater than base discharge.			

Minimum daily, 1.6 ft³/s, July [illegible].

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31	[illegible]	---	[illegible]	[illegible]	---	[illegible]	---	[illegible]	---	[illegible]	[illegible]	[illegible]
TOTAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MEAN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAX	16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIN	13	16	17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AC-FT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CAL YR 1988 TOTAL [illegible] MEAN [illegible] MAX 841 MIN [illegible] AC-FT [illegible]
WTR YR 1989 TOTAL 15521.7 MEAN 42.5 MAX 347 MIN [illegible] AC-FT [illegible]

09257000 LITTLE SNAKE RIVER NEAR DIXON, WY

LOCATION.--Lat 41°01'42", long 107°32'55", in SE¼NW¼ sec.8, T.12 N., R.90 W., Carbon County, Hydrologic Unit 14050003, on left bank 200 ft upstream from highway bridge, 1,000 ft upstream from Willow Creek, and 0.8 mi west of Dixon.

DRAINAGE AREA.--988 mi².

PERIOD OF RECORD.--May 1910 to September 1923, March 1938 to current year (no winter records since 1971). Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1243: 1920(M). WDR CO-85-3: 1984 (M).

GAGE.--Water-stage recorder. Datum of gage is 6,331.22 ft above National Geodetic Vertical Datum of 1929. May 27, 1910, to Sept. 30, 1923, nonrecording gage on highway bridge 200 ft downstream at datum 2.98 ft, higher. Mar. 15, 1938, to Sept. 30, 1957, water-stage recorder at site 225 ft downstream at datum 2.98 ft, higher; Oct. 1, 1957, to June 6, 1968, at site 850 ft downstream at present datum, and June 7 to Sept. 30, 1968, at site 225 ft downstream at present datum.

REMARKS.--No estimated daily discharges. Records fair. Diversions for irrigation of about 9,500 acres upstream from station. One diversion upstream from station for irrigation of about 3,000 acres downstream. Transbasin diversions upstream from station.

AVERAGE DISCHARGE.--46 years (water years 1911-23, 1939-71), 514 ft³/s, 372,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s, May 16, 1984, gage height, 13.56 ft, from floodmark, from rating curve extended above 10,000 ft³/s, some increase in peak due to dam failure; no flow Sept. 19, 20, 22, 1977, Aug. 7, 17, 18, 27-29, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,200 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 24	0530	*2,450	*a7.27				

Minimum daily discharge during current period, 0.17 ft³/s, Sept. 3.
a Maximum during period of operation, but may have been exceeded during ice break-up period.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.1	19	---	---	---	---	353	507	810	1.7	1.8	.20
2	8.4	18	---	---	---	---	316	542	714	1.5	1.6	.20
3	7.8	21	---	---	---	---	289	605	655	1.2	1.5	.17
4	7.2	28	---	---	---	---	233	557	573	1.2	1.2	.19
5	6.0	31	---	---	---	---	232	554	569	1.1	1.0	.36
6	5.8	34	---	---	---	---	255	759	507	1.5	1.1	.33
7	7.6	43	---	---	---	---	478	1050	598	1.6	1.3	.26
8	8.4	50	---	---	---	---	593	1310	511	1.5	1.3	.81
9	8.4	58	---	---	---	---	583	1400	500	1.5	1.3	.90
10	8.6	51	---	---	---	---	401	1480	451	1.4	1.0	1.1
11	9.0	56	---	---	---	---	463	1470	517	1.1	.86	1.4
12	9.0	59	---	---	---	---	420	1560	438	1.1	.93	1.8
13	9.0	73	---	---	---	---	468	1400	355	1.7	.89	2.2
14	9.5	---	---	---	---	---	555	1070	309	3.7	1.3	2.1
15	12	---	---	---	---	---	684	951	264	.89	1.3	1.9
16	11	---	---	---	---	---	838	898	239	.88	1.2	1.5
17	12	---	---	---	---	---	1080	873	228	1.3	1.2	1.2
18	12	---	---	---	---	---	1400	893	193	1.3	1.1	.99
19	12	---	---	---	---	---	1530	1040	151	1.3	1.2	.96
20	12	---	---	---	---	---	1560	1000	81	1.4	1.4	1.1
21	13	---	---	---	---	---	1820	1060	41	1.7	1.5	1.2
22	14	---	---	---	---	---	1810	1090	40	1.5	1.0	1.8
23	13	---	---	---	---	251	1950	1220	34	1.5	.67	1.8
24	13	---	---	---	---	260	1990	1320	34	1.8	.54	1.6
25	15	---	---	---	---	292	1760	1150	28	2.2	.46	1.7
26	15	---	---	---	---	379	1770	935	20	1.8	.47	1.3
27	15	---	---	---	---	372	1280	853	12	2.1	.40	.86
28	18	---	---	---	---	352	923	846	5.9	1.5	.34	.86
29	18	---	---	---	---	407	725	917	3.1	4.6	.31	.84
30	19	---	---	---	---	350	595	981	2.0	31	.26	.72
31	19	---	---	---	---	265	---	905	---	9.9	.22	---
TOTAL	356.8	---	---	---	---	---	27354	31196	8853.0	88.47	30.65	32.35
MEAN	11.5	---	---	---	---	---	912	1006	296	2.85	.99	1.08
MAX	19	---	---	---	---	---	1990	1560	810	31	1.8	2.2
MIN	5.8	---	---	---	---	---	232	507	2.0	.88	.22	.17
AC-FT	708	---	---	---	---	---	54260	61880	17620	175	61	64

09258000 WILLOW CREEK NEAR DIXON, WY

LOCATION.--Lat 40°54'56", long 107°31'16", on line between secs. 8 and 17, T.11 N., R.90 W., Moffat County, Colorado, Hydrologic Unit 14050003, on right bank 6.2 mi south of Colorado-Wyoming State line, 8.0 mi upstream from mouth, and 8.3 mi south of Dixon.

DRAINAGE AREA.--24 mi², approximately.

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,700 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 11 to Mar. 21, June 17-21, and Aug. 1 to Sept. 1. Records good except for estimated daily discharges, which are poor. One small ditch diverts water upstream from station for irrigation. Regulation by Elk Lake, capacity, 400 acre-ft.

AVERAGE DISCHARGE.--36 years, 10.5 ft³/s; 7,610 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 476 ft³/s, May 10, 1984, gage height, 6.02 ft, from rating curve extended above 160 ft³/s; Maximum gage height, 7.08 ft, Apr.18, 1984 (backwater from ice); no flow Sept. 17-19, 1955, many days July through September 1977, and Aug. 8-16, 1982.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 70 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
July 28	1930	*179	*4.51	No other peak greater than base discharge.			

Minimum daily, 1.1 ft³/s, Aug. 31 to Sept. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	2.0	2.2	2.6	2.3	2.7	5.5	2.5	10	2.8	1.7	1.1
2	1.9	2.1	2.3	2.6	2.3	2.8	5.3	2.9	9.8	2.9	1.6	1.1
3	1.8	2.3	2.3	2.6	2.4	2.8	4.3	2.8	13	2.8	1.5	1.1
4	1.8	2.4	2.4	2.6	2.4	2.8	2.8	2.7	27	2.7	1.6	1.1
5	1.9	1.9	2.5	2.5	2.5	2.8	2.9	3.5	19	2.6	1.7	1.1
6	2.0	2.3	2.6	2.5	2.4	2.9	16	5.5	16	2.6	1.6	1.1
7	2.1	1.9	2.5	2.6	2.4	3.0	22	7.7	13	2.7	1.5	1.1
8	2.1	2.2	2.5	2.7	2.3	3.0	22	10	21	2.9	1.4	2.0
9	2.1	2.2	2.2	2.7	2.3	3.2	14	13	16	2.8	1.4	4.9
10	2.1	2.2	2.0	2.6	2.3	3.2	7.1	16	13	2.8	1.4	3.8
11	2.1	2.1	1.9	2.5	2.3	3.5	5.9	16	11	2.8	1.5	2.6
12	2.2	2.2	1.8	2.4	2.3	3.8	7.6	15	11	4.1	1.4	2.3
13	2.1	2.2	1.8	2.5	2.3	4.0	8.0	11	11	3.6	1.9	2.2
14	2.1	2.0	1.8	2.5	2.4	4.0	11	8.9	11	3.0	1.7	1.9
15	2.1	1.9	1.9	2.4	2.4	3.7	13	7.2	6.8	2.4	1.6	1.8
16	2.1	1.8	1.9	2.4	2.4	3.5	17	5.0	4.6	2.1	1.4	1.6
17	2.1	1.7	2.0	2.3	2.4	3.4	19	4.5	4.0	2.1	1.3	1.5
18	2.2	1.9	2.0	2.4	2.3	3.3	19	9.1	3.7	2.1	1.2	1.4
19	2.1	1.9	2.2	2.5	2.3	3.1	18	14	3.5	2.0	1.2	1.4
20	2.0	2.0	2.4	2.6	2.3	3.2	19	9.2	3.4	1.9	1.5	1.5
21	2.0	2.0	2.5	2.6	2.2	3.2	18	12	3.5	1.9	1.7	1.6
22	2.2	1.9	2.6	2.7	2.2	3.4	17	15	4.0	2.1	2.0	1.6
23	2.2	1.9	2.6	2.8	2.1	3.6	17	23	3.6	3.0	1.5	1.4
24	2.0	1.9	2.6	2.8	2.3	4.2	14	20	3.3	3.1	1.3	1.3
25	2.0	2.0	2.5	2.8	2.4	21	12	10	3.3	2.2	1.2	1.3
26	2.0	2.2	2.3	2.8	2.4	19	8.1	10	2.8	2.0	1.3	1.4
27	2.0	2.3	2.2	2.8	2.5	14	4.8	16	3.1	2.0	1.2	1.4
28	1.9	2.3	2.3	2.7	2.6	14	3.7	24	2.9	22	1.2	1.7
29	2.0	2.4	2.4	2.5	---	14	3.1	23	3.1	28	1.2	1.5
30	2.0	2.3	2.5	2.4	---	5.1	2.7	15	3.0	8.2	1.2	1.4
31	1.9	---	2.5	2.3	---	5.1	---	9.4	---	2.3	1.1	---
TOTAL	63.0	62.4	70.2	79.7	65.7	171.4	337.7	343.9	260.4	130.5	45.0	51.2
MEAN	2.03	2.08	2.26	2.57	2.35	5.53	11.3	11.1	8.68	4.21	1.45	1.71
MAX	2.2	2.4	2.6	2.8	2.6	21	22	24	27	28	2.0	4.9
MIN	1.8	1.7	1.8	2.3	2.1	2.7	2.7	2.5	2.8	1.9	1.1	1.1
AC-FT	125	124	139	158	130	340	670	682	517	259	89	102

CAL YR 1988 TOTAL 2790.37 MEAN 7.62 MAX 79 MIN .59 AC-FT 5530
WTR YR 1989 TOTAL 1681.1 MEAN 4.61 MAX 28 MIN 1.1 AC-FT 3330

09259050 LITTLE SNAKE RIVER BELOW BAGGS, WY

LOCATION.--Lat 41°01'43", long 107°41'14", in SE¼ NW¼ NW¼ sec.7, T.12 N., R.92 W., Carbon County, Hydrologic Unit 14050003, 0.8 mi downstream from Ledford Slough, 1.5 mi southwest of Baggs, and 3.5 mi downstream from bridge on State Highway 789 in Baggs.

PERIOD OF RECORD.--Water years 1981 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT 04...	1515	21	518	8.1	17.5	619	9.4	122
JAN [illegible]...	1700	88	342	8.1	0.0	620	11.9	100
APR [illegible]...	1400	2010	134	8.3	10.0	603	9.0	101
JUL 11...	1333	3.40	475	8.8	25.0	615	13.7	207

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)
OCT [illegible]...	K10	<0.1	0.06	0.44	0.5	0.03	<1
JAN [illegible]...	[illegible]	<0.1	[illegible]	0.28	0.3	0.03	<1
APR [illegible]...	[illegible]	[illegible]	[illegible]	0.77	[illegible]	0.06	<1
JUL [illegible]...	[illegible]	<0.1	[illegible]	[illegible]	0.6	[illegible]	<1

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	DICAMBA (MEDI-BEN) (BAN-VEL D) TOTAL (UG/L)	PICLO-RAM (TOR-DON) (AMDON) TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
[illegible]	[illegible]	[illegible]	[illegible]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
APR [illegible]...	[illegible]	[illegible]	[illegible]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

K-Results based on colony count outside the acceptable range (non-ideal colony count).

09259990 SAND WASH NEAR SUNBEAM, CO

LOCATION.--Lat 40°37'12", long 108°22'06", in NW¼NE¼ sec.26, T.8 N., R.98 W., Moffat County, Hydrologic Unit 14050003, on right upstream pier of triple box culvert on state highway 318, 2.3 mi upstream from confluence with Little Snake River, and 10.5 mi northeast of Sunbeam.

DRAINAGE AREA.--239 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,790 ft, above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: July 13, and Aug. 5 to Sept. 6. Records excellent except for periods of flow, which are poor. No regulation or diversions upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 297 ft³/s, March 20, 1989, gage height, 3.27 ft; no flow most days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 297 ft³/s at 0530 March 20, gage height, 3.27 ft; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	51	[illegible]
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	27	[illegible]
3	.00	.00	.00	.00	.00	.44	.00	.00	.00	.00	23	[illegible]
4	.00	.00	.00	.00	.00	7.6	.00	.00	.00	.00	1.2	[illegible]
5	.00	.00	.00	.00	.00	17	.00	.00	.00	[illegible]	.01	[illegible]
6	.00	.00	.00	.00	.00	27	.00	.00	.00	.00	.00	[illegible]
7	.00	.00	.00	.00	.00	42	.00	.00	.00	.00	[illegible]	[illegible]
8	.00	.00	.00	.00	.00	67	.00	.00	.00	[illegible]	[illegible]	[illegible]
9	.00	.00	.00	.00	.00	68	.00	.00	.00	[illegible]	[illegible]	[illegible]
10	.00	.00	.00	.00	.00	103	.00	.00	.00	.00	[illegible]	[illegible]
11	.00	.00	.00	.00	.00	102	.00	.00	.00	[illegible]	[illegible]	[illegible]
12	.00	.00	.00	.00	.00	81	.00	.00	.00	[illegible]	[illegible]	[illegible]
13	.00	.00	.00	.00	.00	112	.00	.00	.00	[illegible]	[illegible]	[illegible]
14	.00	.00	.00	.00	.00	37	.00	.00	.00	.02	[illegible]	[illegible]
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	[illegible]	[illegible]	[illegible]
16	.00	.00	.00	.00	.00	.51	.00	.00	.00	.00	[illegible]	[illegible]
17	.00	.00	.00	.00	.00	20	.00	.00	.00	[illegible]	[illegible]	[illegible]
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	[illegible]	[illegible]
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	[illegible]	[illegible]
20	.00	.00	.00	.00	.00	22	.00	.00	.00	.00	[illegible]	[illegible]
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	[illegible]	[illegible]
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	[illegible]	[illegible]	[illegible]
23	.00	.00	.00	.00	.00	.00	.00	.00	[illegible]	[illegible]	[illegible]	[illegible]
24	.00	.00	.00	.00	.00	.00	.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	.00	.00	.00	.00	.00	.00	.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	.00	.00	.00	.00	.00	.00	.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	.00	.00	.00	.00	.00	.00	.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	[illegible]	[illegible]	[illegible]
29	.00	.00	.00	.00	---	.00	.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	.00	.00	.00	.00	---	.00	.00	[illegible]	[illegible]	49	[illegible]	[illegible]
31	.00	---	.00	.00	---	.00	---	[illegible]	---	[illegible]	[illegible]	---
TOTAL	0.00	0.00	0.00	0.00	0.00	706.55	0.00	0.00	0.00	[illegible]	178.[illegible]	[illegible]
MEAN	.00	.00	.00	.00	.00	22.8	.00	.00	.00	1.71	5.74	[illegible]
MAX	.00	.00	.00	.00	.00	112	.00	.00	.00	49	97	[illegible]
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	[illegible]	[illegible]
AC-FT	.0	.0	.0	.0	.0	1400	.0	.0	.0	105	[illegible]	[illegible]

CAL YR 1988 TOTAL 170.30 MEAN .47 MAX 14 MIN .00 AC-FT 338
WTR YR 1989 TOTAL 937.61 MEAN 2.57 MAX 112 MIN .00 AC-FT 1860

09259990 SAND WASH NEAR SUNBEAM, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--OCTOBER 1987 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO
MAR											
09...	2230	91	--	--	--	12.1	53	17	2.5	110	7
10...	1620	112	535	9.0	2.5	10.9	40	13	1.9	100	7

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
MAR										
09...	0.9	78	200	9.5	0.3	5.7	394	0.54	96.9	0.61
10...	0.9	84	170	8.6	0.3	7.4	354	0.48	107	0.27

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
MAR				
09...	1532	35	--	5.0
09...	2150	91	248	4.0
10...	1000	93	290	--
11...	1100	28	357	6.0
11...	1915	196	369	7.5
13...	1345	29	--	9.0
JUL				
13...	1155	0.06	592	25.0

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
MAR							
09...	1532	35	17500	1700	--	--	--
09...	2230	91	10400	2560	34	44	53
10...	1620	112	21300	6440	35	40	49
11...	1100	28	10500	794	--	--	--
11...	1645	91	12200	3000	36	44	52
11...	1915	196	21000	11100	33	40	48
13...	1045	29	5880	460	--	--	--
JUL							
13...	1155	0.06	10600	1.7	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR						
09...	--	--	--	--	--	37
09...	63	83	93	99	100	--
10...	58	82	95	99	100	--
11...	--	--	--	--	--	53
11...	61	80	94	100	--	--
11...	57	78	92	99	100	--
13...	--	--	--	--	--	33
JUL						
13...	--	--	--	--	--	[illegible]

09260000 LITTLE SNAKE RIVER NEAR LILY, CO

LOCATION.--Lat 40°32'50", long 108°25'25", in NW¼NE¼ sec.20, T.7 N., R.98 W., Moffat County, Hydrologic Unit 14050003, on left bank 170 ft downstream from highway bridge, 6.0 mi north of Lily, and 10 mi upstream from mouth.

DRAINAGE AREA.--3,730 mi², approximately.

PERIOD OF RECORD.--June to August 1904 (published as "near Maybell"), October 1921 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1713: 1959.

GAGE.--Water-stage recorder. Elevation of gage is 5,685 ft, from river-profile map. June 9 to Aug. 14, 1904, nonrecording gage, and May 5, 1922, to Nov. 30, 1935, water-stage recorder, at site 300 ft upstream at different datums.

REMARKS.--Estimated daily discharges: Nov. 20 to Mar. 18. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 21,000 acres upstream from station.

AVERAGE DISCHARGE.--68 years, 586 ft³/s; 424,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,700 ft³/s, May 18, 1984, gage height, 9.85 ft; maximum gage height, 11.1 ft, Feb. 13, 1962, from floodmark (backwater from ice); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 8	1600	*2,690	*4.35				

No flow Sept. 1-8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	63	75	84	90	68	611	809	879	66	12	.00
2	12	67	76	80	84	70	727	710	812	49	12	.00
3	12	73	78	70	84	75	416	632	730	33	17	.00
4	12	62	87	85	87	95	[illegible]	617	678	25	21	.00
5	7.7	58	83	95	90	100	812	620	640	17	13	.00
6	1.9	43	82	90	85	160	1110	560	617	14	14	.00
7	1.9	43	79	86	83	170	1430	533	590	14	9.8	.00
8	1.2	72	79	84	86	230	1470	482	537	12	6.6	.00
9	1.6	85	79	80	86	260	1860	1010	593	7.8	3.6	9.4
10	1.5	95	72	75	83	330	1070	1160	538	8.1	5.2	11
11	1.5	130	78	76	84	400	716	1250	522	9.2	9.1	6.9
12	1.5	99	79	52	87	460	495	1220	552	8.2	12	3.3
13	1.2	110	77	39	90	483	458	1340	585	22	10	3.8
14	1.2	99	77	76	95	[illegible]	446	1340	477	19	8.9	2.0
15	3.4	126	78	85	100	611	471	1110	396	116	6.4	3.1
16	7.4	120	79	92	1[illegible]	453	[illegible]	997	368	41	6.1	11
17	8.8	130	80	92	105	720	718	906	329	16	4.1	12
18	2.7	125	85	88	104	[illegible]	1020	877	279	10	4.6	13
19	7.1	[illegible]	77	86	103	[illegible]	1260	854	246	5.9	2.7	5
20	11	[illegible]	76	84	130	271	1480	334	223	6.7	6.3	5
21	[illegible]	8[illegible]	[illegible]	86	1[illegible]	[illegible]	1850	7[illegible]	1[illegible]	[illegible]	3.4	[illegible]
22	26	72	74	90	95	431	1740	744	175	6.[illegible]	17	17
23	[illegible]	83	[illegible]	[illegible]	97	415	1950	714	12[illegible]	[illegible]	[illegible]	[illegible]
24	45	85	75	[illegible]	9[illegible]	224	1920	974	115	14	9.8	21
25	47	[illegible]	85	90	80	[illegible]	[illegible]	1290	148	14	2.7	15
26	48	73	88	89	75	562	1890	1120	134	13	7.2	12
27	49	77	92	87	73	[illegible]	1750	926	127	[illegible]	7.8	13
28	62	75	88	97	63	577	1490	936	124	13	5.2	17
29	[illegible]	[illegible]	90	33	---	427	1160	[illegible]	11[illegible]	[illegible]	2.7	14
30	41	7[illegible]	94	99	---	237	923	798	86	46	[illegible]	14
31	5[illegible]	---	90	94	---	275	---	819	---	[illegible]	.13	---
TOTAL	6[illegible]	2546	2458	2675	2460	14763	33391	28175	14473	630.7	71.59	338.40
MEAN	[illegible]	84.9	79.3	86.3	88.9	479	1119	909	[illegible]	[illegible]	2.31	11.3
MAX	[illegible]	130	92	95	105	730	2030	1340	879	116	21	[illegible]
MIN	[illegible]	43	[illegible]	39	63	68	416	334	86	[illegible]	.13	.00
AC-FT	[illegible]	[illegible]	4875	5310	4877	29280	66230	55890	[illegible]	1250	[illegible]	[illegible]

CAL YR 1988 TOTAL [illegible] MEAN 44[illegible] MAX [illegible] MIN 1.[illegible] AC-FT [illegible]
WTR YR 1989 TOTAL 97427.67 MEAN 267 MAX 2030 MIN .00 AC-FT 193[illegible]

09260050 YAMPA RIVER AT DEERLODGE PARK, CO

LOCATION.--Lat 40°27'02", long 108°31'20", in SE¼SW¼ sec.21, T.6 N., R.99 W., Moffat County, Hydrologic Unit 1405002, in Dinosaur National Monument, on left bank at Deerlodge Park, 1,250 ft upstream from Disappointment Draw, and 5.5 mi downstream from Little Snake River.

DRAINAGE AREA.--7,660 mi², approximately.

PERIOD OF RECORD.--August 1975 and January 1978 (discharge measurements only), April 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,600 ft above National Geodetic Vertical Datum of 1929, from topographic map.

AVERAGE DISCHARGE.--7 years, 2,653 ft³/s; 2,922,000 acre-ft/yr.

REMARKS.--Estimated daily discharges: Nov. 27 to Mar. 24, July 18-20, and Sept. 1-12. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transbasin diversions, numerous storage reservoirs, and diversions for irrigation of about 86,800 acres upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,200 ft³/s, May 18, 1984, gage height, 19.13 ft; minimum daily, 29 ft³/s, Sept. 11, 1989.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 29	0530	*6,150	*6.84				

Minimum daily, 29 ft³/s, Sept. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	279	246	310	270	170	370	1910	3350	4860	572	427	35
2	[illegible]	273	293	270	180	330	1530	2900	4350	600	377	38
3	253	255	290	262	180	350	1570	2540	4070	553	126	37
4	235	263	[illegible]	[illegible]	190	370	1560	2560	3940	514	130	39
5	274	[illegible]	310	[illegible]	180	350	1620	2850	3580	430	120	38
6	292	[illegible]	[illegible]	250	130	327	1300	2780	3520	376	132	37
7	273	[illegible]	260	220	130	293	1140	2580	3360	446	135	41
8	293	292	[illegible]	[illegible]	180	370	1380	3170	3130	353	142	35
9	288	293	[illegible]	213	180	450	2460	4180	3150	322	142	[illegible]
10	293	237	[illegible]	[illegible]	180	620	2760	4940	3320	279	144	[illegible]
11	285	370	[illegible]	170	130	350	2410	5130	3310	284	144	29
12	[illegible]	253	[illegible]	160	130	[illegible]	1950	5510	3390	313	138	60
13	280	319	240	190	190	1100	1710	5550	3340	259	142	121
14	260	351	255	200	130	1230	1590	5310	3130	252	138	138
15	244	355	320	130	210	1360	1770	4350	2790	215	144	143
16	229	144	230	200	190	1320	2120	4340	2560	271	135	140
17	[illegible]	168	240	[illegible]	210	1150	2410	4450	2490	256	136	152
18	243	153	220	270	220	1230	2990	3270	2550	290	147	145
19	253	138	180	130	230	1270	3850	3160	2430	301	139	142
20	278	257	203	130	240	1200	4640	3600	2170	327	131	143
21	[illegible]	234	215	200	250	1420	4810	4120	[illegible]	130	136	143
22	223	187	[illegible]	250	263	1240	5350	4410	1870	17	157	[illegible]
23	218	[illegible]	[illegible]	[illegible]	282	1400	5240	4160	1670	39	140	142
24	205	[illegible]	190	210	290	1620	5430	4570	1330	53	137	144
25	[illegible]	190	[illegible]	[illegible]	[illegible]	2110	5640	[illegible]	1210	107	137	144
26	238	275	215	213	310	2360	5550	4940	1100	158	143	147
27	223	230	200	220	340	2430	5350	4240	990	352	146	148
28	232	190	190	225	360	2610	5940	3730	880	335	141	145
29	265	[illegible]	200	[illegible]	---	2430	4740	3990	784	309	145	146
30	285	250	185	190	---	2260	3970	4570	735	415	133	147
31	250	---	185	185	---	2430	---	5330	---	574	139	---
TOTAL	7994	7759	[illegible]	[illegible]	5847	37510	94175	121172	77468	9717	4813	3343
MEAN	258	259	[illegible]	[illegible]	209	1210	3139	3909	2582	313	155	111
MAX	304	357	320	273	360	2610	5940	5550	4860	600	427	152
MIN	205	138	180	130	130	[illegible]	1140	2540	735	17	120	29
AC-FT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	186800	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CAL YR 1988 TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN 41 AC-FT [illegible]
WTR YR 1989 TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN 29 AC-FT [illegible]

09302450 LOST CREEK NEAR BUFORD, CO

LOCATION.--Lat 40°03'01", long 107°28'06", in SE¼SE¼ sec.15, T.1 N., R.90 W., Rio Blanco County, Hydrologic Unit 14050005, on left bank 15 ft downstream from highway bridge, 540 ft upstream from mouth, 0.5 mi downstream from Long Park Creek, and 9 mi northeast of Buford.

DRAINAGE AREA.--21.5 mi².

PERIOD OF RECORD.--October 1964 to September 1989 (discontinued).

REVISED RECORDS.--WDR CO-79-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,560 ft above National Geodetic Vertical Datum of 1929, from topographic map. Oct. 1, 1973, to Sept. 30, 1975, at site 150 ft upstream at present datum.

REMARKS.--Estimated daily discharges: Nov. 11 to Feb. 19 and Feb. 25-28. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--25 years, 23.3 ft³/s; 16,880 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 944 ft³/s, May 9, 1974, gage height, 7.53 ft, from rating curve extended above 260 ft³/s; minimum daily, 0.30 ft³/s, Jan. 9, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 23	1900	*309	*3.31	May 9	2100	169	[illegible]

Minimum daily discharge, 1.1 ft³/s, Sept. 2-4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	2.0	2.1	2.3	1.9	2.5	3.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	2.2	2.5	2.5	2.1	1.8	2.4	3.7	57	13	[illegible]	[illegible]	[illegible]
3	2.1	2.4	1.9	2.2	1.8	2.2	4.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	2.1	2.6	1.9	2.3	1.8	2.6	7.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5	2.1	2.2	1.9	2.2	1.9	3.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	2.3	2.1	1.9	2.1	2.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	2.6	2.4	1.8	2.1	2.1	3.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	[illegible]	2.5	1.9	2.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9	2.3	2.4	1.8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	[illegible]	2.5	1.9	[illegible]	2.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11	2.1	2.2	1.9	1.9	[illegible]	5.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12	[illegible]	2.0	1.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13	2.1	2.1	1.9	2.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
14	[illegible]	2.0	2.1	[illegible]	1.8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15	[illegible]	1.9	2.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	2.1	2.1	2.1	[illegible]	2.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17	[illegible]	[illegible]	2.1	[illegible]	1.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18	2.1	[illegible]	2.1	[illegible]	1.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19	2.1	2.1	2.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20	2.1	[illegible]	2.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	[illegible]	[illegible]	[illegible]	1.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
22	2.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	2.0	[illegible]	[illegible]	[illegible]	2.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	2.2	[illegible]	[illegible]	1.9	[illegible]	3.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	2.0	2.1	2.0	1.9	2.1	8.3	143	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	2.1	[illegible]	2.1	[illegible]	2.2	8.3	99	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	2.0	2.0	[illegible]	2.0	2.3	8.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	2.0	2.1	[illegible]	[illegible]	---	11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	[illegible]	[illegible]	2.1	[illegible]	---	11	56	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31	[illegible]	---	[illegible]	[illegible]	---	12	---	[illegible]	---	[illegible]	[illegible]	---
TOTAL	[illegible]	65.4	62.7	[illegible]	57.1	179.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MEAN	[illegible]	2.18	[illegible]	[illegible]	2.04	5.78	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAX	2.6	2.6	[illegible]	[illegible]	2.5	12	191	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIN	[illegible]	1.9	1.8	1.8	1.8	2.2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AC-FT	[illegible]	[illegible]	[illegible]	[illegible]	113	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CAL YR 1988 TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN [illegible] AC-FT [illegible]
WTR YR 1989 TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN 1.1 AC-FT [illegible]

09303000 NORTH FORK WHITE RIVER AT BUFORD, CO

LOCATION.--Lat 39°59'15", long 107°36'50", in NW¼NW¼ sec.9, T.1 S., R.91 W., Rio Blanco County, Hydrologic Unit 14050005, on right bank 600 ft east of Buford and 1.2 mi upstream from South Fork White River.

DRAINAGE AREA.--259 mi² (revised).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1910 to December 1915, July 1919 to December 1920, October 1951 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as North Fork White River near Buford prior to 1951 and as White River at Buford 1951-67. Records for July 1903 to December 1906 at site 6.5 mi upstream not equivalent because of inflow between sites.

REVISED RECORDS.--WSP 1343: 1912. WDR CO-79-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,010 ft above National Geodetic Vertical Datum of 1929, from topographic map. May 24, 1910, to May 27, 1914, nonrecording gage at site 1.5 mi upstream at different datum. May 28, 1914, to Dec. 7, 1915, and July 1, 1919, to Oct. 9, 1920, nonrecording gage at present site at different datum.

REMARKS.--Estimated daily discharges: Dec. 1-7, 9 , 11, 13, 17-31, and Feb. 1-5. Records fair except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 900 acres upstream from, and 300 acres downstream from station.

AVERAGE DISCHARGE.--44 years (water years 1911-15, 1920, 1952-89), 320 ft³/s; 231,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,550 ft³/s, May 24, 1984, gage height, 6.76 ft; maximum gage height, 7.22 ft, Jan. 9, 1957 (backwater from ice); minimum daily discharge, 90 ft³/s, Feb. 21, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. [illegible]	[illegible]	*[illegible]	*[illegible]				

Minimum daily, 127 ft³/s, Feb. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	181	195	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	361	508	281	302	154
2	174	198	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	372	494	279	284	154
3	[illegible]	228	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	373	487	[illegible]	261	[illegible]
4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	395	475	263	246	151
5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	497	397	493	[illegible]	240	[illegible]
6	[illegible]	187	[illegible]	[illegible]	[illegible]	[illegible]	237	413	477	265	229	151
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	249	[illegible]	153
8	182	190	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	648	459	252	205	153
9	182	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	266	635	441	224	232	151
10	183	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	258	630	451	225	227	149
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15	179	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	177	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31	[illegible]	---	[illegible]	[illegible]	---	[illegible]	---	[illegible]	---	[illegible]	[illegible]	---
TOTAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MEAN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAX	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AC-FT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CAL YR [illegible] TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN [illegible] AC-FT [illegible]
WTR YR [illegible] TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN [illegible] AC-FT [illegible]

09303000 NORTH FORK WHITE RIVER AT BUFORD, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
NOV									
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAR									
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAY									
24...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	[illegible]	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV									
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAR									
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAY									
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible]

[illegible]

09303000 NORTH FORK WHITE RIVER AT BUFORD, CO--Continued

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT					APR				
04...	1427	178	322	12.0	12...	1240	226	428	3.0
NOV					MAY				
09...	1035	199	316	6.0	18...	1500	454	258	15.5
DEC					JUN				
13...	1429	233	[illegible]	1.0	09...	1049	447	[illegible]	14.0
JAN					JUL				
[illegible]	0948	113	404	0.0	11...	1015	217	[illegible]	14.0
FEB					AUG				
[illegible]	1130	166	[illegible]	0.0	07...	0922	215	[illegible]	13.0

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
[illegible]	[illegible]	208	12	6.7	--
MAR					
[illegible]	[illegible]	169	11	[illegible]	--
MAY					
[illegible]	[illegible]	[illegible]	27	[illegible]	[illegible]

09303300 SOUTH FORK WHITE RIVER AT BUDGE'S RESORT, CO

LOCATION.--Lat 39°50'36", long 107°20'03", in NW¼ sec.36, T.2 S., R.89 W., Garfield County, Hydrologic Unit 14050005, on right bank 20 ft upstream from Forest Service trail bridge, 0.2 mi upstream from Wagonwheel Creek, and 0.3 mi northeast of Budge's Resort.

DRAINAGE AREA.--52.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1975 to current year.

REVISED RECORDS.--WDR CO-79-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 8,980 ft above National Geodetic Vertical Datum of 1929, from topographic map. June 1, 1975, to July 7, 1976, at site on left bank 50 ft upstream at datum 1.4 ft, lower.

REMARKS.--Estimated daily discharges: Nov. 28 to Feb. 25. Records good except for estimated daily discharges, which are poor. No diversion upstream from station.

AVERAGE DISCHARGE.--14 years, 108 ft³/s; 78,250 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,750 ft³/s, June [illegible], 1983, gage height, 6.57 ft, from rating curve extended above 850 ft³/s; minimum daily, [illegible] ft³/s, Sept. 29, 30, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 522 ft³/s at 2300 May 29, gage height, 4.92 ft; minimum daily, 41 ft³/s, Feb. 4-5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31	[illegible]	---	[illegible]	[illegible]	---	[illegible]	---	[illegible]	---	[illegible]	[illegible]	---
TOTAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MEAN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAX	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AC-FT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CAL YR 1988 TOTAL [illegible] MEAN [illegible] MAX 87 MIN 44 AC-FT [illegible]
WTR YR 1989 TOTAL [illegible] MEAN [illegible] MAX 496 MIN 41 AC-FT [illegible]

09303300 SOUTH FORK WHITE RIVER AT BUDGE'S RESORT,CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to September 1989, (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT									
1...	[illegible]	[illegible]	140	[illegible]	8.5	9.6	[illegible]	[illegible]	[illegible]
AUG									
31...	1145	65	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT									
1...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AUG									
31...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
OCT								
1...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AUG								
31...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DATE	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ANTI-MONY, TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
OCT										
1...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
OCT										
1...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

09303300 SOUTH FORK WHITE RIVER AT BUDGE'S RESORT,CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
NOV					APR				
02...	1045	56	--	0.0	17...	1220	65	161	[illegible]
JAN					JUN				
30...	1303	51	136	[illegible]	30...	1045	[illegible]	167	[illegible]

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
[illegible]					[illegible]				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

09303320 WAGONWHEEL CREEK AT BUDGE'S RESORT, CO

LOCATION.--Lat 39°50'40", long 107°20'10", in SW¼SW¼ sec.25, T.2 S., R.89 W., Garfield County, Hydrologic Unit 14050005, on right bank 60 ft upstream from mouth and confluence of South Fork White River, about 800 ft downstream from private road bridge, and 0.2 mi north-northeast of Budge's Resort.

DRAINAGE AREA.--7.36 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1975 to September 1989 (discontinued).

REVISED RECORDS.--WDR CO-79-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 8,980 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Mar. 1 to Apr. 8, and Apr. 12-14. Records good except for periods of flow above 4.0 ft³/s, which are fair, and those for estimated daily discharges, and periods of flow below 4.0 ft³/s, which are poor.

AVERAGE DISCHARGE.--14 years, 10.9 ft³/s; 7,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 336 ft³/s, June 8, 1985, gage height 4.64 ft; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 55 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May [illegible]	[illegible]	*144	*1.63	No other peak greater than base discharge.			

No flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.34	1.4	111	13	1.8	.03
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.34	1.7	101	13	2.0	.03
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.32	1.7	99	12	2.2	.03
4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.27	.32	[illegible]	73	12	1.7	.03
5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.33	4.3	69	12	1.5	.03
6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.38	.33	6.9	67	12	1.6	.03
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.37	.33	7.9	60	11	1.6	.00
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.34	14	[illegible]	11	1.2	.03
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.37	.35	24	52	11	.73	.00
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.32	.35	47	[illegible]	11	.70	.00
11	[illegible]	[illegible]	[illegible]	[illegible]	.33	.31	.52	[illegible]	49	11	1.9	.00
12	[illegible]	[illegible]	[illegible]	[illegible]	.33	.32	.34	62	45	11	2.6	.00
13	[illegible]	[illegible]	[illegible]	[illegible]	.31	.33	.33	60	43	11	1.9	.01
14	[illegible]	[illegible]	[illegible]	[illegible]	.31	.31	.33	50	33	11	1.5	.04
15	[illegible]	[illegible]	[illegible]	[illegible]	.34	.32	.33	46	26	7.2	1.4	.04
16	[illegible]	[illegible]	[illegible]	[illegible]	.33	.32	.36	63	19	6.0	.78	.04
17	[illegible]	[illegible]	[illegible]	[illegible]	.35	.33	.33	35	17	5.8	.67	.03
18	[illegible]	[illegible]	[illegible]	[illegible]	.35	.31	[illegible]	35	17	5.0	.57	.03
19	[illegible]	[illegible]	[illegible]	[illegible]	.33	.30	.82	45	13	5.9	.39	.03
20	[illegible]	[illegible]	[illegible]	[illegible]	.33	.31	1.2	82	15	5.0	.47	.03
21	[illegible]	[illegible]	[illegible]	[illegible]	.35	.31	1.4	101	27	5.1	.47	.03
22	[illegible]	[illegible]	[illegible]	[illegible]	.35	.31	1.4	117	25	5.1	.47	.03
23	[illegible]	[illegible]	[illegible]	[illegible]	.38	.33	1.5	137	21	5.1	.42	.03
24	[illegible]	[illegible]	[illegible]	[illegible]	.35	.33	2.4	136	19	5.3	.42	.03
25	[illegible]	[illegible]	[illegible]	[illegible]	.35	.31	5.1	131	18	5.1	.42	.00
26	[illegible]	[illegible]	[illegible]	[illegible]	.33	.31	3.9	115	17	4.9	.34	.03
27	[illegible]	[illegible]	[illegible]	[illegible]	.35	.31	3.9	119	16	4.8	.35	.03
28	[illegible]	[illegible]	[illegible]	[illegible]	.33	.31	3.9	133	15	4.3	.35	.03
29	[illegible]	[illegible]	[illegible]	.30	---	.31	3.9	115	19	1.4	.31	.03
30	[illegible]	[illegible]	[illegible]	.30	---	.32	3.9	115	19	1.9	.33	.03
31	[illegible]	---	[illegible]	.30	---	.32	---	111	---	1.5	.30	---
TOTAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.61	32.81	1948.6	1283	246.7	29.35	1.25
MEAN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.310	1.09	62.9	42.7	7.95	.95	.042
MAX	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.33	3.9	136	111	13	2.6	.04
MIN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.30	.32	1.4	13	1.5	.30	.00
AC-FT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	19	65	3870	2540	489	58	[illegible]

CAL YR 1988 TOTAL [illegible] MEAN 7.8[illegible] MAX [illegible] MIN .00 AC-FT 5690
WTR YR 1989 TOTAL [illegible] MEAN 9.7[illegible] MAX 136 MIN .00 AC-FT 7027

09303320 WAGONWHEEL CREEK AT BUDGES RESORT, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1983 to Swptember 1989, (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT									
12...	1315	0.06	285	8.2	4.0	8.9	170	42	15
AUG									
01...	1330	1.5	292	8.5	11.0	7.4	160	42	14

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT									
12...	3.5	0.1	0.5	169	2.8	[illegible]	[illegible]	[illegible]	163
AUG									
01...	3.4	0.1	0.3	167	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)
OCT								
12...	[illegible]	[illegible]	<0.01	<0.10	[illegible]	[illegible]	<0.01	[illegible]
AUG								
01...	[illegible]	[illegible]	<0.01	<0.10	<0.01	[illegible]	<0.01	<0.01

DATE	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ANTI-MONY, TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
OCT										
12...	[illegible]	<1	<1	[illegible]	[illegible]	<1	[illegible]	[illegible]	[illegible]	[illegible]

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
OCT										
12...	<5	<10	<10	<0.1	[illegible]	[illegible]	<1	[illegible]	[illegible]	<10

09303320 WAGONWHEEL CREEK AT BUDGES RESORT, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
APR					JUN				
13...	1413	0.03	392	4.0	30...	1200	12	315	15.0

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
APR					AUG				
4...	[illegible]	0.06	24	0.00	31...	1730	1.6	8	0.03

09303400 SOUTH FORK WHITE RIVER NEAR BUDGE'S RESORT, CO

LOCATION.--Lat 39°51'51", long 107°32'00", in NW¼SE¼ sec.19, T.2 S., R.90 W., Rio Blanco County, Hydrologic Unit 14050005, on right bank on downstream side of Forest Service bridge, 300 ft upstream from South Fork Campground, 10 mi above mouth, and about 10.5 mi southeast of Buford.

DRAINAGE AREA.--128 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1976 to current year.

REVISED RECORDS.--WDR CO-79-3: 1976 (M), 1977, 1978 (P), 1978.

GAGE.--Water-stage recorder. Elevation of gage is 7,600 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 20 to Mar. 2. Records good except for estimated daily discharges, which are poor. No regulation or diversions upstream from station.

AVERAGE DISCHARGE.--13 years, 210 ft³/s; 152,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,770 ft³/s, June 22, 1983, gage height, 6.18 ft; minimum daily, 40 ft³/s, Feb. 1 to Mar. 10, 1980, Dec. 30, 1980, Jan. 10, 15, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 29	2100	*1,230	*4.74	No other peak greater than base discharge.			

Minimum daily, 46 ft³/s, Feb. 4-5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	[illegible]	73	60	63	62	56	76	186	811	198	104	63
2	91	72	58	64	59	61	71	181	772	183	[illegible]	63
3	80	[illegible]	57	65	52	66	73	175	735	180	104	61
4	81	74	56	66	46	65	73	174	639	[illegible]	99	61
5	81	72	54	58	46	77	69	174	602	[illegible]	96	62
6	84	73	[illegible]	63	49	103	73	221	633	[illegible]	93	61
7	82	73	60	[illegible]	50	86	85	[illegible]	580	143	[illegible]	61
8	80	74	58	56	55	68	97	343	535	[illegible]	87	59
9	83	76	61	[illegible]	57	73	99	434	556	136	87	[illegible]
10	82	73	60	61	64	77	96	493	572	133	87	66
11	81	81	57	63	64	79	94	[illegible]	646	138	98	65
12	80	80	61	57	62	74	91	537	658	[illegible]	[illegible]	[illegible]
13	81	79	60	[illegible]	58	74	93	473	574	136	97	74
14	79	[illegible]	60	[illegible]	54	72	100	441	575	127	89	[illegible]
15	78	81	58	63	60	73	109	[illegible]	606	[illegible]	84	65
16	77	83	61	61	70	[illegible]	[illegible]	371	[illegible]	[illegible]	[illegible]	64
17	78	[illegible]	57	[illegible]	68	68	128	[illegible]	619	[illegible]	[illegible]	62
18	76	[illegible]	[illegible]	[illegible]	56	66	157	344	527	[illegible]	[illegible]	[illegible]
19	75	[illegible]	[illegible]	[illegible]	63	67	178	[illegible]	437	[illegible]	[illegible]	61
20	76	93	60	60	53	67	191	[illegible]	461	[illegible]	[illegible]	[illegible]
21	75	89	54	61	54	69	244	617	419	[illegible]	[illegible]	66
22	75	86	54	56	53	97	284	694	360	133	[illegible]	[illegible]
23	74	69	56	57	54	65	293	769	326	134	[illegible]	[illegible]
24	73	65	58	[illegible]	57	65	301	772	293	[illegible]	[illegible]	[illegible]
25	73	75	58	60	60	63	327	743	282	[illegible]	[illegible]	[illegible]
26	73	61	56	59	64	72	315	642	262	117	73	63
27	74	67	51	64	60	72	277	658	243	109	72	60
28	73	73	53	68	58	71	241	759	232	113	69	58
29	73	60	57	63	---	75	212	900	221	147	[illegible]	59
30	73	57	61	63	---	74	200	933	219	120	65	57
31	73	---	63	62	---	76	---	906	---	[illegible]	[illegible]	---
TOTAL	2408	2264	1806	1932	1621	2220	4798	15460	15104	[illegible]	[illegible]	[illegible]
MEAN	77.7	75.5	58.3	62.3	57.9	71.6	160	499	503	[illegible]	[illegible]	[illegible]
MAX	84	93	63	68	70	103	327	933	811	198	[illegible]	[illegible]
MIN	[illegible]	57	51	55	46	56	69	174	219	[illegible]	[illegible]	[illegible]
AC-FT	4780	4490	3580	3830	3220	4400	9520	30660	29960	[illegible]	[illegible]	[illegible]

CAL YR 1988 TOTAL 61557 MEAN 168 MAX 1330 MIN 51 AC-FT 122100
WTR YR 1989 TOTAL 56259 MEAN 154 MAX 933 MIN 46 AC-FT 111600

09303400 SOUTH FORK WHITE RIVER NEAR BUDGES RESORT, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1983 to September 1989 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
NOV									
10...	1050	73	191	8.3	1.0	10.7	100	28	8.0
APR									
24...	1105	302	195	8.4	4.0	9.9	100	29	7.1
MAY									
25...	0925	816	189	8.4	4.0	9.9	100	29	6.9

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV									
10...	1.9	0.1	0.9	101	5.0	0.6	0.1	15	120
APR									
24...	1.6	0.1	0.8	98	3.5	0.4	0.1	12	114
MAY									
25...	1.0	0.0	0.6	99	3.0	0.3	0.1	7.6	103

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
NOV								
10...	0.16	23.7	0.01	<0.1	<0.01	<0.2	0.01	<0.01
APR								
24...	0.16	93.0	<0.01	0.26	0.01	<0.2	0.01	0.02
MAY								
25...	0.14	227	<0.01	0.12	<0.01	<0.2	0.01	<0.01

DATE	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ANTI-MONY, TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
NOV										
10...	50	<1	<1	<100	<10	1	<1	1	1	[illegible]
MAY										
25...	540	<1	<1	<100	<10	<1	2	1	5	650

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
NOV										
10...	<1	<10	10	<0.1	<1	2	<1	<1	[illegible]	<10
MAY										
25...	4	<10	30	<0.1	3	6	<1	<1	50	<10

09303400 SOUTH FORK WHITE RIVER NEAR BUDGES RESORT, CO--Continued

MISCELLANEOUS FIELD MEASUREMENTS AND CROSS SECTION PROFILES, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK)	DIS- CHARGE, INST. CUBIC FEET PER SECOND	PERCENT OF DIS- CHARGE, IN CROSS SECTION	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)
OCT								
04...	1005	--	80	--	191	--	7.0	--
DEC								
06...	1116	--	57	--	209	--	--	--
JAN								
06...	1230	--	78	--	216	--	0.0	--
MAR								
01...	0924	--	58	--	197	--	1.0	--
APR								
24...	1125	20.0	--	13	195	8.40	4.0	9.9
24...	1126	40.0	--	64	196	8.36	4.0	9.9
24...	1127	60.0	--	23	196	8.35	4.0	9.7
MAY								
18...	0952	--	325	--	251	--	4.0	--
JUN								
02...	1425	--	711	--	218	--	[illegible]	--
JUL								
06...	1147	--	162	--	167	--	[illegible]	--
AUG								
07...	1254	--	134	--	273	--	13.0	--

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
10...	1050	73	6	1.2	--
APR					
24...	1105	302	19	15	41
MAY					
25...	0925	816	71	156	24

09303500 SOUTH FORK WHITE RIVER NEAR BUFORD, CO

LOCATION.--Lat 39°55'18", long 107°33'04", in NW¼SE¼ sec.36, T.1 S., R.91 W., Rio Blanco County, Hydrologic Unit 14050005, on left bank at upstream side of county bridge, 10 ft downstream from Peltier Creek, and 5.6 mi southeast of Buford.

DRAINAGE AREA.--157 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1903 to October 1906, June 1910 to December 1915, October 1942 to September 1947, April 1967 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1057: 1944-45, WDR CO-79-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,480 ft above National Geodetic Vertical Datum of 1929, from topographic map. July 26, 1903, to Oct. 31, 1906, nonrecording gage, and Oct. 1, 1942, to Sept. 30, 1947, water-stage recorder, at site 60 ft upstream at different datums. Records for 1919-20 at site 6.0 mi downstream not equivalent.

REMARKS.--Estimated daily discharges: Dec. [illegible], and Feb. 7-27. Records good except for estimated daily discharges, which are fair. Diversions for irrigation of about 600 acres of hay meadows upstream from station.

AVERAGE DISCHARGE.--35 years (water years 1904-06, 1911-15, 1943-47, 1968-89), 268 ft³/s; 194,200 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,620 ft³/s, June 24, 1983, gage height, 7.73 ft; maximum gage height 8.2 ft, June 17, 1936, site and datum then in use; minimum discharge recorded, 56 ft³/s, Dec. 18, 1946, gage height, 1.91 ft, site and datum then in use, but may have been less during periods of no gage-height record.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 30	[illegible]	*1,240	*[illegible]	No other peak greater than base discharge.			

Minimum daily, [illegible] ft³/s, Dec. [illegible].

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	993	236	138	107
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	792	227	147	106
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	738	218	140	104
4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	651	210	[illegible]	104
5	113	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	686	203	130	104
6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	634	195	126	106
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	633	190	122	104
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	403	616	189	118	113
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	186	118	119
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	685	[illegible]	120	111
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	734	[illegible]	128	[illegible]
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	651	190	146	116
13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	629	[illegible]	135	121
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	189	[illegible]	639	177	127	[illegible]
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	666	169	[illegible]	[illegible]
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	162	121	107
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	599	[illegible]	[illegible]	106
18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	126	105
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	148	[illegible]	[illegible]
20	[illegible]	[illegible]	118	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	130	115
21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	146	[illegible]	[illegible]	444	137	[illegible]	112
22	114	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	439	142	117	106
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	376	[illegible]	[illegible]	[illegible]	115	[illegible]
24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	106
25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	[illegible]	121	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	163	[illegible]	791	[illegible]	[illegible]	[illegible]	103
28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	163	374	[illegible]	[illegible]	[illegible]	[illegible]	103
29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	277	[illegible]	110	103
30	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31	[illegible]	---	[illegible]	[illegible]	---	[illegible]	---	[illegible]	---	[illegible]	[illegible]	---
TOTAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MEAN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAX	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AC-FT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	27350	[illegible]	[illegible]	[illegible]	[illegible]

CAL YR 1988 TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN [illegible] AC-FT [illegible]
WTR YR 1989 TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN [illegible] AC-FT [illegible]

09303500 SOUTH FORK WHITE RIVER NEAR BUFORD, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
NOV									
10...	1400	111	223	8.0	2.0	10.4	120	34	8.7
MAY									
23...	1210	950	212	8.4	6.0	[illegible]	110	32	7.3

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV									
10...	2.0	0.1	0.8	105	23	0.6	0.1	19	147
MAY									
23...	1.0	0.0	0.6	108	8.0	[illegible]	0.1	7.2	117

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
NOV								
10...	0.20	44.1	0.01	<0.1	<0.01	0.30	0.01	<0.01
MAY								
23...	0.16	300	<0.01	0.14	<0.01	0.80	0.01	<0.01

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT				
04...	1334	111	225	9.0
DEC				
26...	1459	123	240	--
JAN				
06...	1030	125	246	0.0
MAR				
01...	1155	150	217	--
APR				
24...	1445	398	216	10.0

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
MAY				
16...	1530	[illegible]	188	--
JUN				
01...	1030	87	[illegible]	[illegible]
JUL				
06...	[illegible]	197	[illegible]	17.0
AUG				
07...	1213	[illegible]	272	14.0

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
10...	1400	111	2	0.60	--
MAY					
23...	1210	950	83	213	45

09304000 SOUTH FORK WHITE RIVER AT BUFORD, CO

LOCATION.--Lat 39°58'28", long 107°37'30", in NW¼NE¼ sec.17, T.1 S., R.91 W., Rio Blanco County, Hydrologic Unit 14050005, on right bank 30 ft downstream from highway bridge, 0.8 mi upstream from mouth, and 1.0 mi south of Buford.

DRAINAGE AREA.--177 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1919 to December 1920 (monthly discharge only, published in WSP 1313), October 1951 to current year.

REVISED RECORDS.--WDR CO-79-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,970 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 30, 1920, nonrecording gage at site 200 ft downstream, at different datum. Oct. 1951 to Apr. 1981, at site 500 ft downstream, at different datum.

REMARKS.--Estimated daily discharges: Nov. 28 to Feb. 25. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 1,100 acres upstream from station, and a small area downstream from station.

AVERAGE DISCHARGE.--39 years, 261 ft³/s; 189,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,150 ft³/s, June 26, 1983; gage height, 6.27 ft; maximum gage height, 7.07 ft, June 30, 1957, site and datum then in use, minimum daily discharge, 47 ft³/s, Jan. 15, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 30	0500	*1,130	*4.22				

Minimum daily, 87 ft³/s, Feb. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126	114	124	125	110	126	144	255	907	225	141	113
2	124	115	122	126	113	136	132	248	879	216	147	111
3	124	120	120	129	100	136	131	230	797	205	141	109
4	121	121	119	129	88	99	127	224	725	192	135	107
5	128	116	121	135	87	155	129	223	676	185	131	109
6	131	113	125	124	92	147	136	243	632	177	126	107
7	127	118	124	116	95	131	152	304	646	173	120	106
8	126	113	122	110	105	119	164	379	645	174	116	115
9	123	129	123	109	103	127	171	511	625	167	116	127
10	125	119	124	121	120	125	168	584	616	166	120	115
11	120	127	128	125	121	137	158	646	695	169	127	114
12	120	113	120	117	114	139	150	660	726	177	151	127
13	120	116	126	135	109	138	152	583	642	173	143	123
14	124	125	126	119	104	128	156	529	639	162	128	123
15	124	125	122	125	113	119	164	480	648	143	125	118
16	122	118	123	121	131	126	173	445	674	135	119	112
17	118	120	120	124	128	122	193	413	693	126	115	111
18	119	130	121	125	123	116	218	404	579	123	121	108
19	118	129	126	125	119	121	251	437	542	120	121	110
20	119	142	124	123	108	119	259	593	506	114	126	120
21	118	156	123	125	101	108	315	713	465	111	117	119
22	115	162	113	130	99	124	354	800	411	116	113	113
23	115	159	118	130	102	119	365	897	380	156	110	107
24	117	141	121	129	135	122	395	916	348	149	103	103
25	117	128	121	121	110	129	401	880	326	136	113	105
26	116	125	117	114	147	134	409	736	303	135	121	104
27	116	117	105	125	132	139	370	732	287	124	120	104
28	116	163	102	132	125	134	333	839	263	127	121	104
29	116	125	113	122	---	142	293	972	256	173	124	126
30	116	120	122	122	---	138	274	1040	243	161	122	105
31	116	---	124	120	---	128	---	966	---	143	118	---
TOTAL	3739	3824	3721	3802	3118	3992	6824	17935	16845	4861	3853	3360
MEAN	121	127	120	123	111	129	227	579	562	157	124	112
MAX	131	163	128	135	147	155	409	1040	907	225	151	127
MIN	115	113	102	108	87	99	127	223	243	111	103	103
AC-FT	7420	7580	7380	7540	6180	7920	13540	35570	33410	9640	7640	6660

CAL YR 1988   TOTAL 84794   MEAN 232   MAX 1590   MIN 80   AC-FT 168200
WTR YR 1989   TOTAL 75865   MEAN 208   MAX 1040   MIN 87   AC-FT 150500

09304000 SOUTH FORK WHITE RIVER AT BUFORD, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1984 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
NOV									
14...	1205	112	264	8.4	4.0	10.2	140	40	9.5
MAR									
15...	1400	158	273	8.8	5.0	10.8	140	42	9.4
MAY									
24...	1040	945	208	8.4	5.5	10.0	110	32	7.5

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV									
14...	2.5	0.1	0.9	111	32	0.6	0.1	15	167
MAR									
15...	2.4	0.1	0.9	113	25	0.6	0.1	17	173
MAY									
24...	1.0	0.0	0.5	107	7.4	0.3	0.1	7.4	12[illegible]

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
NOV								
14...	0.22	50.5	<0.01	<0.1	<0.01	.2[illegible]	0.01	<0.01
MAR								
15...	0.24	74.9	<0.01	<0.1	<0.01	<0.2	0.01	0.01
MAY								
24...	0.16	[illegible]	<0.01	.1[illegible]	[illegible]	.[illegible]	.02	<0.01

DATE	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ANTI-MONY, TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
NOV										
14...	60	<1	<1	<100	<10	<1	[illegible]	<1	[illegible]	3[illegible]
MAY										
24...	1100	<1	<1	<100	<10	<1	2	[illegible]	[illegible]	1500

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
NOV										
14...	7	<10	10	<0.1	<1	[illegible]	<1	<1	[illegible]	[illegible]
MAY										
24...	3	<10	40	0.3	5	[illegible]	<1	<1	[illegible]	[illegible]

09304000 SOUTH FORK WHITE RIVER AT BUFORD, CO--Continued

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT				
07...	0915	117	200	7.0
DEC				
12...	0934	80	355	1.0
13...	1216	96	--	1.0
JAN				
12...	1153	109	364	0.0
FEB				
17...	1100	104	285	1.0
MAR				
07...	1010	92	310	1.0
APR				
12...	0945	149	232	6.0
MAY				
05...	1442	214	257	15.0
JUN				
01...	1410	883	227	13.0
JUL				
03...	1010	206	316	15.0
31...	1011	143	336	15.0
SEP				
19...	1100	100	321	11.0

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
14...	1235	112	9	2.7	--
MAR					
15...	1400	158	17	7.3	--
MAY					
24...	1043	848	91	204	43

09304200 WHITE RIVER ABOVE COAL CREEK, NEAR MEEKER, CO

LOCATION.--Lat 40°00'18", long 107°49'29", in NW¼NW¼ sec.3, T.1 S., R.93 W., Rio Blanco County, Hydrologic Unit 14050005, on left bank 40 ft downstream from county road bridge, 2.3 mi upstream from Coal Creek, and 5.0 mi southeast of Meeker.

DRAINAGE AREA.--648 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1961 to current year.

REVISED RECORDS.--WDR CO-79-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,400 ft above National Geodetic Vertical Datum of 1929, from topographic map. Oct. 1, 1961, to Sept. 30, 1976, at site 76 ft upstream at datum 2.00 ft, higher.

REMARKS.--Estimated daily discharges: Apr. 16 to May 5, July 10, 21-22, and Sept. 5-19. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 8,900 acres and about 4,000 acres downstream from station.

AVERAGE DISCHARGE.--28 years, 581 ft³/s; 420,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,790 ft³/s, June 26, 1983, gage height, 7.17 ft; minimum daily, 6.5 ft³/s, July 19-21, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 1[illegible]	1300	*1,510	*5.43				

Minimum daily, 78 ft³/s, Sept. 1, 17-19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	[illegible]	347	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	434	[illegible]	[illegible]	[illegible]	338	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	418	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	[illegible]	377	[illegible]	374	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31	[illegible]	---	[illegible]	[illegible]	---	[illegible]	---	[illegible]	---	[illegible]	[illegible]	---
TOTAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MEAN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAX	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AC-FT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CAL YR 1988 TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN [illegible] AC-FT [illegible]
WTR YR 1989 TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN 78 AC-FT [illegible]

09304200 WHITE RIVER ABOVE COAL CREEK NEAR MEEKER, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1978 to September 1984, October 1986 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1978 to September 1984.
WATER TEMPERATURES: July 1978 to September 1984.

INSTRUMENTATION.--Water-quality monitor July 1978 to September 1984.

REMARKS.--Unpublished daily maximum and minimum specific conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 511 microsiemens Dec. 24, 1981; minimum 152 microsiemens June 14,1980.
WATER TEMPERATURES: Maximum, 22.0°C July 8, 1981; minimum, 0.0°C on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
NOV									
14...	1440	329	386	8.7	4.5	11.0	200	61	12
MAY									
23...	1445	1380	239	8.4	10.5	9.7	120	35	7.9

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV									
14...	[illegible]	[illegible]	[illegible]	[illegible]	98	[illegible]	[illegible]	[illegible]	259
MAY									
23...	[illegible]	[illegible]	[illegible]	[illegible]	36	0.70	0.1	10	158

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
NOV								
14...	[illegible]	[illegible]	<0.01	<0.1	[illegible]	<0.2	[illegible]	<0.01
MAY								
23...	[illegible]	[illegible]	<0.01	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DATE	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ANTI-MONY, TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
NOV										
14...	[illegible]	<1	<1	<100	<10	<1	1	<1	2	[illegible]

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
NOV										
14...	<5	[illegible]	[illegible]	<0.1	<1	2	<1	<1	[illegible]	<1

09304200 WHITE RIVER ABOVE COAL CREEK NEAR MEEKER, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT				
07...	1220	343	417	[illegible]
DEC				
13...	1402	331	[illegible]	[illegible]
JAN				
10...	1120	333	--	[illegible]
FEB				
10...	0957	385	[illegible]	[illegible]
MAR				
07...	1510	302	[illegible]	[illegible]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
APR				
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
MAY				
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
JUN				
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
JUL				
[illegible]...	[illegible]	[illegible]	[illegible]	--
[illegible]...	[illegible]		[illegible]	[illegible]
AUG				
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	--
MAY					
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

09304500 WHITE RIVER NEAR MEEKER, CO

LOCATION.--Lat 40°[illegible]", long 107°[illegible]", in NE¼ sec.[illegible], T.1 N., R.94 W., Rio Blanco County, Hydrologic Unit 14050005, on left bank 1.9 mi upstream from Curtis Creek and [illegible] mi east of Meeker.

DRAINAGE AREA.--[illegible] mi².

PERIOD OF RECORD.--June 1901 to December 1906, October 1909 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "at Meeker" 1901-06.

REVISED RECORDS.--WDR CO-[illegible]: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is [illegible] ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to [illegible], and May [illegible] to Aug. [illegible], nonrecording gage, and Aug. [illegible] to Oct. [illegible], water-stage recorder, at site [illegible] mi downstream, at different datum. Oct. [illegible] to Sept. [illegible], water-stage recorder at present site, at datum [illegible] ft, higher, prior to Oct. [illegible], and at datum [illegible] ft, higher, thereafter.

REMARKS.--Estimated daily discharges: [illegible]. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about [illegible] acres upstream from station, and about [illegible] acres downstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--[illegible] years, [illegible] ft³/s, [illegible] acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, [illegible] ft³/s, [illegible]; maximum gage height, [illegible] ft, [illegible]; minimum daily discharge, [illegible] ft³/s, [illegible].

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of [illegible] ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
[illegible]	----	----	*[illegible]	[illegible]	[illegible]	*[illegible]	[illegible]

[illegible]

DISCHARGE, [illegible], WATER YEAR [illegible]
DAILY MEAN VALUES

[illegible]

CAL YR [illegible] TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN [illegible] AC-FT [illegible]
WTR YR [illegible] TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN [illegible] AC-FT [illegible]

09304800 WHITE RIVER BELOW MEEKER, CO

LOCATION.--Lat 40°00'48", long 108°05'33", in center of sec.31, T.1 N., R.95 W., Rio Blanco County, Hydrologic Unit 14050005, on left bank 30 ft downstream from county bridge, 4.5 mi downstream from Strawberry Creek, and 10 mi west of Meeker.

DRAINAGE AREA.--1,024 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1961 to current year.

REVISED RECORDS.--WDR CO-79-3: Drainage area. WDR CO-86-2: 1985.

GAGE.--Water-stage recorder. Elevation of gage is [illegible] ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 9 to Dec. [illegible] and Jan. [illegible] to Mar. 4. Records good except for estimated daily discharges, which are poor. Diversion upstream from station for irrigation of about [illegible] acres upstream from station, and a few small hay meadows downstream from station.

AVERAGE DISCHARGE.--28 years, 673 ft³/s; 487,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, [illegible] ft³/s, June [illegible], [illegible], gage height, [illegible] ft; minimum daily, 35 ft³/s, June 28, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of [illegible] ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May [illegible]	[illegible]	*[illegible]	*[illegible]				

Minimum daily, [illegible] ft³/s, Sept. [illegible].

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER [illegible] TO SEPTEMBER [illegible]
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	---	[illegible]	[illegible]	---	[illegible]	---	[illegible]	---	[illegible]	[illegible]	---
TOTAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MEAN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAX	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AC-FT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CAL YR [illegible] TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN [illegible] AC-FT [illegible]
WTR YR [illegible] TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN [illegible] AC-FT [illegible]

09304800 WHITE RIVER BELOW MEEKER, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1974 to September 1984, October 1985 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1978 to September 1983.
WATER TEMPERATURES: July 1978 to September 1983.

INSTRUMENTATION.--Water-quality monitor July 1978 to September 1983.

REMARKS.--Unpublished maximum and minimum specific conductance data for period of daily record available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 908 microsiemens Aug. 30, 1981; minimum, 2[illegible]1 microsiemens June 1[illegible], 198[illegible].
WATER TEMPERATURES: Maximum, 2[illegible].0°C Aug. 7, 1978, Aug. 7, 1980; minimum, 0.0°C many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DATE	[illegible]	[illegible]	[illegible]	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DATE	[illegible]	[illegible]	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

09304800 WHITE RIVER BELOW MEEKER, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ANTI-MONY, TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
NOV										
09...	350	<1	1	<100	<10	1	<1	<1	3	430
JUN										
20...	570	<1	1	<100	<10	<1	<1	<1	6	400

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
NOV										
09...	11	<10	40	<0.1	<1	4	2	1	720	<10
JUN										
20...	4	10	40	<0.1	1	6	1	<1	500	10

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT				
11...	1118	391	578	9.0
DEC				
16...	1134	336	589	1.0
JAN				
03...	1205	398	550	0.0
27...	1001	262	598	0.0
APR				
06...	1050	465	--	9.0

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
MAY				
09...	1400	1260	324	16.0
30...	1620	1510	376	14.0
JUL				
05...	1047	359	721	17.0
AUG				
03...	1050	328	651	18.0

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
09...	1530	485	37	48	79
APR					
19...	1520	970	223	584	76
JUN					
23...	1305	917	19	47	73

09306007 PICEANCE CREEK BELOW RIO BLANCO, CO

LOCATION.--Lat 39°49'34", long 108°10'57", in SE¼SE¼ sec.32, T.2 S., R.96 W., Rio Blanco County, Hydrologic Unit 14050006, on left bank 20 ft downstream from private bridge, 1,100 ft upstream from Stewart Gulch, and 14.3 mi west of Rio Blanco.

DRAINAGE AREA.--177 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1974 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,366 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 18, 19, Dec. 27 to Jan. 2, Jan. 7-10, 12-30, Feb. 4-11, and Feb. 4-16. Records good except for estimated daily discharges, which are poor. Several diversions upstream from station for irrigation of hay meadows.

AVERAGE DISCHARGE.--15 years, 22.5 ft³/s;, 16,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 520 ft³/s July 19, 1977, gage height, 7.01 ft, from rating curve based on indirect measurement of peak flow, maximum gage height, 7.47 ft, May 16, 1984; minimum daily discharge, 0.10 ft³/s, June 17-19, 1989.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 13	2215	*79	*3.12				

Minimum daily, 0.10 ft³/s, June 17-19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	8.3	12	11	12	11	43	11	7.4	4.6	1.3	4.2
2	5.7	8.1	11	11	12	9.3	43	8.7	11	7.6	1.3	5.8
3	6.8	8.9	11	12	11	9.9	45	4.0	7.4	7.7	1.2	5.8
4	6.1	9.2	11	11	9.5	12	47	1.9	6.5	9.7	1.1	9.5
5	6.0	13	12	12	9.0	14	43	1.5	6.7	9.1	1.1	8.5
6	6.5	9.9	12	12	8.5	9.0	39	.57	8.0	5.9	1.0	7.1
7	5.7	9.4	10	11	9.0	9.1	41	3.1	7.3	6.2	.69	6.4
8	6.1	11	11	10	9.5	18	42	4.6	7.7	5.5	2.9	5.3
9	6.2	10	14	10	10	28	43	4.0	8.6	6.2	6.0	2.9
10	5.9	8.3	12	12	10	38	40	1.8	8.0	7.3	5.5	1.7
11	7.9	10	10	12	11	36	40	1.9	6.4	6.9	2.9	3.1
12	9.4	7.3	11	11	12	39	37	2.5	5.7	5.2	3.2	7.8
13	9.7	9.4	10	11	12	51	36	1.8	2.9	4.0	2.6	8.9
14	9.4	9.0	10	10	12	54	36	1.6	.96	4.4	2.9	8.1
15	9.4	10	11	9.5	12	47	36	2.1	.64	4.8	2.1	7.9
16	10	8.9	10	9.0	11	42	36	2.3	.82	3.9	3.2	7.9
17	11	11	12	9.5	11	41	35	2.6	.10	4.0	7.9	7.8
18	13	12	11	10	11	39	34	9.0	.10	4.1	8.4	7.9
19	13	10	10	10	11	42	30	17	.10	1.9	8.0	7.9
20	11	11	11	10	11	42	28	16	.98	.46	8.2	8.4
21	12	13	11	11	10	36	33	16	.95	1.8	7.0	7.9
22	10	16	12	12	10	40	33	13	1.4	3.6	6.9	7.8
23	9.8	15	11	12	9.7	41	32	12	1.6	5.5	6.8	6.9
24	9.9	14	13	11	11	49	30	12	1.8	5.1	6.7	6.8
25	11	14	12	11	13	52	26	14	3.3	2.0	6.8	6.8
26	11	13	12	10	13	52	22	13	2.5	2.1	7.2	7.0
27	11	13	11	9.5	12	48	24	9.5	1.7	1.9	7.6	6.9
28	10	12	10	9.0	11	43	25	8.8	1.1	1.6	8.4	6.5
29	9.2	13	10	9.5	---	43	23	8.8	2.4	2.2	8.4	6.4
30	8.8	13	10	10	---	42	16	9.2	3.5	2.9	8.6	6.4
31	8.8	---	10	12	---	42	---	9.2	---	1.9	6.7	---
TOTAL	273.1	330.7	344	331.0	304.2	1079.3	1038	223.47	117.55	140.06	152.59	202.3
MEAN	8.81	11.0	11.1	10.7	10.9	34.8	34.6	7.21	3.92	4.52	4.92	6.74
MAX	13	16	14	12	13	54	47	17	11	9.7	8.6	9.5
MIN	2.8	7.3	10	9.0	8.5	9.0	16	.57	.10	.46	.69	1.7
AC-FT	542	656	682	657	603	2140	2060	443	233	278	303	401

CAL YR 1988 TOTAL 4762.89 MEAN 13.0 MAX 74 MIN .38 AC-FT 9450
WTR YR 1989 TOTAL 4536.27 MEAN 12.4 MAX 54 MIN .10 AC-FT 9000

09306007 PICEANCE CREEK BELOW RIO BLANCO, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1974 to September 1985.
pH: December 1974 to September 1984.
WATER TEMPERATURE: December 1974 to September 1985.
DISSOLVED OXYGEN: December 1974 to September 1984.
SUSPENDED SEDIMENT DISCHARGE: April 1974 to September 1985.

INSTRUMENTATION.--Automatic pumping sediment sampler April 1974 to September 1985. Water-quality monitor December 1974 to September 1985.

REMARKS.--Unpublished maximum and minimum specific conductance data for period of daily record available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,690 microsiemens June 21, 1976; minimum, 344 microsiemens Apr. 13, 1976.
pH: Maximum, 9.0 units June 21, 1976; minimum, 7.0 units May 24, 1976.
WATER TEMPERATURES: Maximum, 29.5°C July 25, 1977; minimum, freezing point on many days during winter months each year.
DISSOLVED OXYGEN: Maximum, 15.7 mg/L Oct. 8, 1975; minimum, 5.1 mg/L July 17, 1979.
SEDIMENT CONCENTRATIONS: Maximum daily, 20,300 mg/L July 20, 1974; minimum daily, 6 mg/L several days during September 1976.
SEDIMENT LOADS: Maximum daily, 18,600 tons May 16, 1984; minimum daily, 0.02 ton Apr. 20, 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
NOV 07...	1000	8.9	1270	8.2	4.0	11.7	490	92	63	140
MAR 09...	1000	12	1100	8.3	5.0	9.6	390	76	48	110
JUN 12...	1020	5.8	1300	8.2	10.0	9.4	460	87	59	140
AUG 08...	1455	6.2	1280	8.4	20.0	8.6	420	72	58	140

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
NOV 07...	3	2.8	402	300	20	0.8	15	880	1.19
MAR 09...	2	5.3	369	230	19	0.8	13	729	0.99
JUN 12...	3	3.0	441	290	19	0.7	14	881	1.19
AUG 08...	3	2.8	390	300	20	0.8	16	845	1.15

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)
NOV 07...	21.1	0.01	0.63	0.02	0.20	0.03	<0.01	190	1900
MAR 09...	23.6	0.02	0.84	0.21	0.80	0.09	0.06	150	1600
JUN 12...	13.8	<0.01	0.26	0.03	0.50	<0.01	0.02	190	1900
AUG 08...	14.2	<0.01	<0.1	<0.01	0.50	0.01	<0.01	210	1800

09306007 PICEANCE CREEK BELOW RIO BLANCO, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	COBALT, DIS-SOLVED (UG/L AS CO)	IRON, DIS-SOLVED (UG/L AS FE)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV									
07...	2	110	1	13	17	96	6	1	7
JUN									
12...	2	100	<1	26	14	230	6	1	8

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT					APR				
03...	1039	5.9	1410	12.0	05...	1400	43	1150	12.0
DEC					MAY				
07...	1243	9.3	1220	--	01...	1653	5.8	1280	17.0
JAN					JUL				
04...	1134	7.8	1240	1.0	07...	1445	6.4	1280	20.0
FEB					AUG				
13...	1355	11	1280	0.0	18...	0845	10	1260	14.5

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
07...	1000	8.9	38	0.91	--
MAR					
09...	1000	12	115	3.7	52
JUN					
12...	1020	5.8	60	0.94	--
AUG					
18...	1450	6.2	35	0.59	--

09306022 STEWART GULCH ABOVE WEST FORK NEAR RIO BLANCO, CO

LOCATION.--Lat 39°49'09", long 108°11'08", in SE¼NE¼ sec.5, T.3 S., R.96 W., Rio Blanco County, Hydrologic Unit 14050006, on left bank 0.6 mi upstream from mouth, about 300 ft above confluence with West Fork Stewart Gulch, and 14.2 mi west of Rio Blanco.

DRAINAGE AREA.--44.0 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to September 1982.
pH: October 1974 to March 1982.
WATER TEMPERATURE: October 1974 to September 1982.
DISSOLVED OXYGEN: October 1974 to March 1982.
SUSPENDED-SEDIMENT DISCHARGE: October 1974 to September 1982.

INSTRUMENTATION.--Water-quality monitor October 1974 to September 1982. Pumping sediment sampler October 1974 to September 1982.

REMARKS.--Unpublished maximum and minimum specific conductance data for period of daily record available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 2,200 microsiemens Nov. 19, 1975; minimum, 583 microsiemens Feb. 22, 1982.
pH: Maximum, 8.9 units Dec. 9, 11, 1979; minimum, 7.6 units Oct. 7, 1975.
WATER TEMPERATURES: Maximum, 20.5°C July 3, 1976, June 3, 1977; minimum, 0.0°C Jan. 9, Dec. 17, 1977, Mar. 3, Dec. 2, 3, 1978, Jan. 29, 1979.
DISSOLVED OXYGEN: Maximum, 16.6 mg/L Jan. 13, 1976; minimum, 3.6 mg/L Aug. 19, 20, 1977.
SEDIMENT CONCENTRATIONS: Maximum daily, 1,350 mg/L June 8, 1975; minimum daily, no flow Aug. 7-9, 1976.
SEDIMENT LOADS: Maximum daily, 10 tons estimated June 8, 1975; minimum daily, no flow Aug. 7-9, 1976.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
NOV										
07...	1145	2.9	1320	8.2	9.0	10.6	500	95	73	110
MAR										
09...	1155	4.6	1100	8.3	11.0	9.3	410	71	55	95
JUN										
12...	1150	2.0	1360	8.4	9.5	9.5	--	--	--	--
AUG										
08...	1410	0.34	1320	8.4	15.9	8.7	--	--	--	--

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)
NOV										
07...	2	1.3	369	370	9.6	0.2	15	899	1.22	7.04
MAR										
09...	2	2.2	318	290	8.2	0.3	12	736	1.0	9.14

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
NOV										
07...	<0.01	3.20	0.02	<0.2	0.02	<0.01	90	2500	34	0.27
MAR										
09...	<0.01	2.00	0.06	0.50	0.09	0.07	70	2100	--	--

09306042 PICEANCE CREEK TRIBUTARY NEAR RIO BLANCO, CO

LOCATION.--Lat 39°50'01", long 108°13'12", in SE¼NE¼ sec.36, T.2 S., R.97 W., Rio Blanco County, Hydrologic Unit 14050006, on left bank 600 ft upstream from mouth and 16.2 mi west of Rio Blanco.

DRAINAGE AREA.--1.06 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1974 to August 1984, May 1985 to current year.

REVISED RECORDS.--WDR CO-79-3: 1977 (M). WDR CO-86-2: 1984-85 (M).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 6,335 ft above National Geodetic Vertical Datum of 1929, from topographic map. Nov. 10, 1980 to June 10, 1981 at datum 0.21 ft, lower.

REMARKS.--Estimated daily discharges: Nov. 20, Nov. 28 to Dec. 2, Dec. 5-6, 9, 19, Dec. 27 to Jan. 1, Feb. 7-8, and Mar. 4-6. Records fair except for estimated daily discharges, which are poor. Most flow this year due to discharge from settling ponds on tract Cb, except for summer thunderstorms.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 506 ft³/s, Aug. 1, 1984, gage height, 6.38 ft, on basis of slope-area measurement of peak flow; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9.3 ft³/s at 1645 Mar. 10, gage height, 1.97 ft; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	.20	.15	.15	.15	.20	.02	.10	.18	.09	.34	.26
2	.18	.20	.15	.16	.16	.20	.05	.12	.21	.11	.37	.28
3	.18	.19	.17	.16	.14	.19	.06	.12	.26	.11	.34	.26
4	.21	.20	.28	.14	.10	.15	.07	.05	.28	.13	.34	.24
5	.22	.13	.20	.24	.15	.20	.03	.01	.27	.10	.29	.22
6	.22	.17	.22	.19	.13	.20	.07	.04	.07	.10	.24	.23
7	.20	.21	.23	.17	.15	.24	.04	.11	.25	.11	.32	.24
8	.22	.16	.29	.17	.15	.36	.10	.17	.07	.17	.22	.28
9	.21	.27	.25	.18	.17	.57	.04	.11	.07	.24	.24	.21
10	.21	.34	.28	.17	.18	.50	.02	.07	.07	.19	.32	.21
11	.19	.27	.18	.17	.17	.17	.07	.19	.07	.16	.22	.19
12	.19	.21	.25	.16	.17	.15	.03	.23	.04	.17	.24	.28
13	.18	.29	.19	.19	.17	.01	.02	.17	.08	.28	.18	.17
14	.19	.31	.16	.21	.21	.0	.04	.23	.07	.25	.20	.22
15	.19	.20	.15	.18	.19	.0	.04	.15	.04	.17	.23	.17
16	.20	.18	.18	.18	.21	.0	.07	.27	.07	.21	.21	.18
17	.18	.22	.17	.18	.21	.0	.04	.14	.12	.16	.21	.18
18	.18	.24	.18	.16	.21	.0	.07	.06	.10	.16	.21	.18
19	.18	.14	.20	.17	.23	.0	.07	.19	.12	.16	.20	.24
20	.20	.15	.23	.16	.23	.0	.08	.16	.09	.15	.23	.19
21	.20	.13	.18	.17	.21	.01	.08	.12	.28	.14	.23	.19
22	.20	.23	.16	.16	.22	.0	.07	.11	.18	.20	.26	.21
23	.21	.12	.19	.17	.23	.0	.08	.10	.22	.17	.22	.17
24	.21	.17	.17	.17	.22	.0	.13	.18	.19	.16	.19	.17
25	.21	.14	.21	.16	.21	.0	.15	.15	.16	.13	.23	.17
26	.18	.13	.17	.15	.20	.03	.14	.09	.23	.20	.38	.18
27	.19	.13	.15	.16	.19	.04	.22	.20	.21	.24	.24	.23
28	.19	.15	.15	.15	.21	.02	.30	.14	.25	.23	.21	.17
29	.19	.15	.15	.16	---	.05	.16	.27	.20	.26	.21	.19
30	.19	.15	.15	.16	---	.04	.12	.22	.13	.31	.21	.17
31	.20	---	.15	.17	---	.01	---	.16	---	.35	.22	---
TOTAL	6.08	5.78	5.94	5.27	5.17	3.34	2.48	4.43	4.58	5.61	7.75	6.28
MEAN	.20	.19	.19	.17	.18	.11	.083	.14	.15	.18	.25	.21
MAX	.22	.34	.29	.24	.23	.57	.30	.27	.28	.35	.38	.28
MIN	.18	.12	.15	.14	.10	.00	.02	.01	.04	.09	.18	.17
AC-FT	12	11	12	10	10	6.6	4.9	8.8	9.1	11	15	12

CAL YR 1988 TOTAL 64.45 MEAN .18 MAX .54 MIN .00 AC-FT 128
WTR YR 1989 TOTAL 62.71 MEAN .17 MAX .57 MIN .00 AC-FT 124

09306042 PICEANCE CREEK TRIBUTARY NEAR RIO BLANCO, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1974 to August 1984, April 1985 to February 1986.
pH: February to September 1981.
WATER TEMPERATURE: April 1974 to August 1984, April 1985 to February 1986.
SUSPENDED-SEDIMENT DISCHARGE: April 1974 to September 1982.

INSTRUMENTATION.--Water-quality monitor April 1974 to February 1986. Pumping sediment sampler April 1974 to September 1982.

REMARKS.--Unpublished maximum and minimum values of specific conductance for periods of daily record are available in the district office. Water-quality monitor was moved Feb. 21, 1986 to the discharge pipe of a settling pond on Occidental Petroleum's tract C-b oil shale lease. Daily monitor data subsequent to Feb. 20, 1986 are site specific and not published in this report.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 2,570 microsiemens Sept. 16, 1980; minimum observed, 220 microsiemens Jan. 26, 1982.
WATER TEMPERATURES: Maximum, 35.0°C Aug. 6, 1985; minimum, 0.0°C many days during winter months.
SEDIMENT CONCENTRATIONS: Maximum daily, 28,000 mg/L estimated Sept. 3, 1978; no flow many days dry years.
SEDIMENT LOADS: Maximum daily, 900 tons, estimated, Sept. 3, 1978; no flow many days dry years.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO
NOV											
07...	1510	0.21	2270	9.0	11.0	8.[illegible]	[illegible]	7.4	7.[illegible]	600	28
MAR											
09...	1345	2.7	[illegible]	9.[illegible]	7.0	[illegible]	[illegible]	1.6	1.3	290	34
JUN											
12...	1300	0.35	2240	9.1	14.5	8.[illegible]	[illegible]	3.6	4.1	680	35
AUG											
08...	1250	1.22	2520	9.1	23.[illegible]	8.[illegible]	40	6.9	6.3	640	[illegible]

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	BROMIDE DIS-SOLVED (MG/L AS BR)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)
NOV										
07...	1.7	1340	38	8.[illegible]	[illegible]	0.02	13	[illegible]	[illegible]	0.81
MAR										
09...	1.4	608	[illegible]	4.8	0.5	0.07	9.4	729	0.99	4.[illegible]
JUN										
12...	1.8	1260	93	7.[illegible]	[illegible]	--	12	1480	2.01	[illegible]
AUG										
08...	1.9	1250	99	8.1	[illegible]	--	12	1560	[illegible]	[illegible]

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	OIL AND GREASE, TOTAL RECOV. GRAVI-METRIC (MG/L)	BORON, DIS-SOLVED (UG/L AS B)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)
NOV										
07...	0.02	0.58	0.08	0.30	0.02	<0.01	4.7	2	750	[illegible]
MAR										
09...	0.03	0.47	0.04	0.80	0.08	0.05	6.5	<1	340	280
JUN										
12...	0.02	0.37	<0.01	[illegible]	<0.01	<0.01	4.7	[illegible]	[illegible]	[illegible]
AUG										
08...	<0.01	<0.1	<0.01	0.50	<0.01	<0.01	--	--	[illegible]	[illegible]

09306058 WILLOW CREEK NEAR RIO BLANCO, CO

LOCATION.--Lat 39°50'14", long 108°14'37", in NW¼NE¼ sec.35, T.2 S., R.97 W., Rio Blanco County, Hydrologic Unit 14050006, on right bank 1,500 ft upstream from mouth and 17.4 mi west of Rio Blanco.

DRAINAGE AREA.--48.4 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1974 to September 1985, October 1986 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1974 to September 1982.
pH: March 1976 to February 1982.
WATER TEMPERATURE: November 1974 to September 1982.
DISSOLVED OXYGEN: March 1976 to February 1982.
SUSPENDED-SEDIMENT DISCHARGE: October 1974 to September 1982.

INSTRUMENTATION.--Water-quality monitor November 1974 to September 1982. Pumping sediment sampler October 1974 to September 1982.

REMARKS.--Unpublished daily maximum and minimum specific conductance data for period of daily record are available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,920 microsiemens July 14, 1976; minimum, 528 microsiemens Mar. 18, 1976.
pH: Maximum, 8.8 units Mar. 11, 1980; minimum, 7.4 units June 4, 6, 1980.
WATER TEMPERATURES: Maximum, 30.5°C July 4, 1982; minimum, 0.0°C on many days during winter months each year.
DISSOLVED OXYGEN: Maximum, 12.9 mg/L Mar. 29, 1979; minimum, 3.6 mg/L Sept. 29, 1978.
SEDIMENT CONCENTRATIONS: Maximum daily, 7,030 mg/L July 29, 1979; no flow many days during 1978.
SEDIMENT LOADS: Maximum daily, 61 tons July 29, 30, 1979; no flow many days during 1978.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
NOV										
08...	[illegible]	[illegible]	1260	8.1	8.0	9.6	[illegible]	87	75	110
MAR										
14...	0955	5.2	1280	8.5	7.0	11.4	[illegible]	92	69	[illegible]
JUN										
20...	1055	0.81	1290	8.1	16.0	9.9	--	--	--	--
AUG										
08...	1205	1.72	1330	8.4	19.0	7.7	--	--	--	--

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
NOV									
08...	2	1.3	407	480	12	0.4	12	[illegible]	1.27
MAR									
14...	[illegible]	1.7	418	[illegible]	[illegible]	0.4	[illegible]	[illegible]	[illegible]

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)
NOV									
08...	3.08	<0.01	0.45	0.02	<0.2	0.02	0.01	[illegible]	[illegible]
MAR									
14...	13.4	<0.01	0.82	0.02	0.30	0.03	0.02	[illegible]	2610

09306061 PICEANCE CREEK ABOVE HUNTER CREEK NEAR RIO BLANCO, CO

LOCATION.--Lat 39°51'02", long 108°15'31", in SE¼NE¼ sec.27, T.2 S., R.97 W., Rio Blanco County, Hydrologic Unit 14050006, on left bank 120 feet downstream from private bridge, 0.4 mi upstream from Hunter Creek, and 18.7 mi west of Rio Blanco.

DRAINAGE AREA.--309 mi²

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to September 1985.
pH: October 1974 to September 1984.
WATER TEMPERATURE: October 1974 to September 1985.
DISSOLVED OXYGEN: October 1974 to September 1984.
SUSPENDED-SEDIMENT DISCHARGE: April 1974 to September 1985.

INSTRUMENTATION.--Automatic pumping sediment sampler April 1974 to September 1985. Water-quality monitor October 1974 to September 1985.

REMARKS.--Unpublished maximum and minimum specific conductance data for period of daily record available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum 1,980 microsiemens Jan. 15, 1976; minimum, 440 microsiemens Apr. 19, 1985.
pH: Maximum, 8.9 units Dec. 7, 1977; minimum, 7.4 units Apr. 18, 1979.
WATER TEMPERATURES: Maximum, 26.5°C June 26, 1977; minimum, freezing point on many days during winter months.
DISSOLVED OXYGEN: Maximum, 16.5 mg/L Mar. 21, 22, 1976; minimum, 3.1 mg/L Sept. 10, 1978.
SEDIMENT CONCENTRATIONS: Maximum daily, 15,000 mg/L May 2, 1986; minimum daily, no flow Oct. 4, 5, 1977.
SEDIMENT LOADS: Maximum daily, 27,000 tons estimated Sept. 8, 1977; minimum daily, no flow Oct. 4, 5, 1977.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
NOV										
08...	1105	15	1550	8.2	5.0	9.5	530	83	77	170
JUN										
13...	1315	5.6	1590	8.4	13.5	11.0	560	83	85	190
AUG										
08...	1105	5.3	1570	8.3	16.0	9.7	--	--	--	--

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)
NOV										
08...	3	3.2	445	430	15	1.1	15	1040	1.41	42.1
JUN										
13...	3	3.4	458	420	13	0.7	16	1080	1.47	16.4

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
NOV										
08...	0.01	0.31	0.04	<0.2	0.03	0.02	[illegible]	[illegible]	--	--
JUN										
13...	<0.01	0.18	0.04	0.60	0.01	0.02	[illegible]	[illegible]	33	0.50

09306200 PICEANCE CREEK BELOW RYAN GULCH, NEAR RIO BLANCO, CO

LOCATION.--Lat 39°55'16", long 108°17'49", in sec.32, T.1 S., R.97 W., Rio Blanco County, Hydrologic Unit 14050006, on left bank at downstream side of bridge, 40 ft downstream from Ryan Gulch, and 23 mi northwest of Rio Blanco.

DRAINAGE AREA.--506 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to current year.

REVISED RECORDS.--WDR CO-79-3: 1977 (M).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 6,070 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 19, Dec. 28 to Feb. 23, and Aug. 18-23. Records good except for estimated daily discharges, which are fair. Diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--25 years, 32.2 ft³/s; 23,330 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 550 ft³/s, May 5, 1985, gage height, 7.70 ft; maximum gage height, 7.81 ft, May 28, 1983; minimum daily discharge, 0.15 ft³/s, June 7, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 9	2015	*212	*6.26	No other peak greater than base discharge.			

Minimum daily, 6.3 ft³/s, July 4, 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	23	30	24	30	30	56	15	11	7.[illegible]	8.3	13
2	15	24	30	22	27	31	55	12	12	7.0	8.8	13
3	15	23	27	22	29	34	57	13	14	7.7	8.5	12
4	[illegible]	22	30	[illegible]	26	29	58	12	13	6.8	7.9	15
5	15	24	30	[illegible]	24	35	50	11	16	6.4	7.5	16
6	15	26	30	[illegible]	[illegible]	29	41	9.7	17	7.0	7.5	12
7	16	26	24	24	21	32	47	12	17	6.7	7.0	14
8	13	26	28	[illegible]	23	43	[illegible]	8.[illegible]	15	8.9	6.6	15
9	13	27	30	[illegible]	27	110	52	7.8	13	7.1	10	14
10	16	[illegible]	29	19	26	110	51	8.[illegible]	11	8.0	20	12
11	16	24	[illegible]	21	19	81	48	7.[illegible]	10	8.2	19	12
12	17	24	[illegible]	24	[illegible]	[illegible]	44	7.[illegible]	11	[illegible]	18	[illegible]
13	20	27	30	21	[illegible]	[illegible]	42	7.[illegible]	11	8.9	15	13
14	20	28	29	18	24	[illegible]	41	8.3	10	8.7	13	16
15	23	30	29	[illegible]	[illegible]	[illegible]	40	7.7	9.8	8.[illegible]	12	15
16	24	28	[illegible]	[illegible]	24	47	41	7.7	9.4	7.4	[illegible]	14
17	24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	40	7.[illegible]	8.8	8.[illegible]	12	15
18	[illegible]	31	24	[illegible]	[illegible]	[illegible]	41	8.[illegible]	8.7	8.[illegible]	12	[illegible]
19	20	28	[illegible]	[illegible]	[illegible]	[illegible]	29	[illegible]	7.[illegible]	7.[illegible]	13	15
20	20	29	30	[illegible]	[illegible]	[illegible]	31	[illegible]	7.[illegible]	7.[illegible]	17	14
21	21	29	26	15	27	[illegible]	38	[illegible]	7.4	6.3	15	16
22	24	34	26	14	[illegible]	[illegible]	27	11	7.2	7.9	15	15
23	[illegible]	24	[illegible]	[illegible]	[illegible]	[illegible]	25	[illegible]	7.6	9.[illegible]	15	15
24	20	36	27	[illegible]	25	58	23	[illegible]	7.[illegible]	12	16	15
25	20	25	29	20	33	73	20	13	8.1	11	[illegible]	13
26	21	34	25	19	35	72	11	12	9.3	9.2	19	10
27	22	33	24	22	33	66	11	11	9.2	8.6	18	12
28	22	32	24	20	30	57	13	11	7.6	8.5	18	11
29	22	[illegible]	[illegible]	22	---	[illegible]	15	11	7.[illegible]	8.6	18	9.3
30	22	30	23	24	---	52	17	11	7.[illegible]	[illegible]	19	8.5
31	23	---	25	28	---	50	---	11	---	9.9	16	---
TOTAL	605	852	880	661	746	1870	1124	321.6	310.8	250.4	433.1	412.8
MEAN	19.5	28.4	28.4	21.3	26.6	60.3	37.5	10.4	10.4	8.08	14.0	13.8
MAX	24	36	35	28	35	115	58	15	17	12	20	19
MIN	14	23	23	18	22	25	11	7.1	7.0	6.3	6.6	8.5
AC-FT	1200	1690	1750	1310	1480	3710	2230	638	616	497	859	819

CAL YR 1988 TOTAL 10185.7 MEAN 27.8 MAX 90 MIN 6.6 AC-FT 20200
WTR YR 1989 TOTAL 8466.7 MEAN 23.2 MAX 115 MIN 6.3 AC-FT 16790

09306200 PICEANCE CREEK BELOW RYAN GULCH NEAR RIO BLANCO, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1979 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1979 to September 1982, November 1985 to current year.
WATER TEMPERATURE: December 1979 to September 1982, November 1985 to current year.
SUSPENDED-SEDIMENT DISCHARGE: October 1972 to September 1983.

INSTRUMENTATION.--Automatic pumping sediment sampler October 1972 to September 1983. Water-quality monitor December 1979 to September 1982, November 1985 to current year.

REMARKS.--Unpublished maximum and minimum specific conductance data for the periods of daily record are available in the district office. Interruptions in the daily record are due to instrument malfunctions.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum 2,920 microsiemens July 18, 1981; minimum, 570 microsiemens July 18, 1981.
WATER TEMPERATURES: Maximum 26.5°C June 27, 1981; minimum, 0.0°C on many days during the winter period.
SEDIMENT CONCENTRATIONS: Maximum daily, 21,700 mg/L July 29, 1977; minimum daily, 8 mg/L Oct. 14, 1979, several days in Sept. 1981.
SEDIMENT LOADS: Maximum daily, 5,290 tons July 26, 1977; minimum daily, 0.05 ton Sept. 27, 28, 1981.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Not determined.
WATER TEMPERATURES: Maximum 25.7°C June [illegible]; minimum, 0.0°C several days during the winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER [illegible] TO SEPTEMBER [illegible]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
NOV										
09...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAR										
14...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
JUN										
13...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AUG										
18...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
NOV									
09...	3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAR									
14...	3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
JUN									
13...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AUG									
18...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)
NOV									
09...	82.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAR									
14...	163	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
JUN									
13...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AUG									
18...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

09306200 PICEANCE CREEK BELOW RYAN GULCH NEAR RIO BLANCO, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV									
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7	[illegible]	[illegible]
JUN									
[illegible]...	3	[illegible]	<1	[illegible]	[illegible]	[illegible]	[illegible]	<1	[illegible]

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAR					
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
JUN					
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AUG					
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	--

[illegible], WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]	[illegible]	[illegible]
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]	[illegible]	[illegible]
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]	[illegible]	[illegible]
4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]	[illegible]	---	[illegible]
13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]	[illegible]	---	[illegible]
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]	[illegible]	---	[illegible]
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]	[illegible]	---	[illegible]
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]	[illegible]	---	[illegible]
17	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	---	[illegible]
18	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	---	[illegible]
19	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	---	[illegible]
20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	---	[illegible]
21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	---	[illegible]
22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	---	[illegible]
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31	[illegible]	---	[illegible]	[illegible]	---	[illegible]	---	[illegible]	---	[illegible]	[illegible]	---

09306200 PICEANCE CREEK BELOW RYAN GULCH NEAR RIO BLANCO, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.9	5.8	9.0	3.0	3.4	[illegible]	[illegible]	[illegible]	[illegible]	.0	6.8	[illegible]
2	[illegible]	6.1	[illegible]	[illegible]	3.5	.0	.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	15.7	6.5	9.9	6.5	3.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	14.3	[illegible]	7.8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5	14.1	[illegible]	7.8	.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	11.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]
30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]
31	[illegible]	[illegible]	---	---	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]
MONTH	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DAY	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	
1	---	---	---	---	[illegible]	[illegible]	---	---	---	---	[illegible]	[illegible]
2	---	---	---	---	[illegible]	[illegible]	---	---	---	---	[illegible]	[illegible]
3	---	---	---	---	[illegible]	[illegible]	---	---	---	---	[illegible]	[illegible]
4	---	---	[illegible]	[illegible]	[illegible]	[illegible]	---	---	---	---	[illegible]	[illegible]
5	---	---	[illegible]	[illegible]	[illegible]	[illegible]	---	---	---	---	[illegible]	[illegible]
6	---	---	[illegible]	[illegible]	[illegible]	[illegible]	---	---	---	---	[illegible]	[illegible]
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]
12	---	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]
13	---	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]
14	---	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]
15	---	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]
16	---	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]
17	---	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]
18	---	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]
19	---	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]
20	---	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	[illegible]	[illegible]
21	---	---	[illegible]	[illegible]	---	---	[illegible]	[illegible]	---	---	[illegible]	[illegible]
22	---	---	[illegible]	[illegible]	---	---	[illegible]	[illegible]	---	---	[illegible]	[illegible]
23	---	---	[illegible]	[illegible]	---	---	[illegible]	[illegible]	---	---	[illegible]	[illegible]
24	---	---	[illegible]	[illegible]	---	---	[illegible]	[illegible]	---	---	[illegible]	[illegible]
25	---	---	[illegible]	[illegible]	---	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	---	---	[illegible]	[illegible]	---	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	---	---	[illegible]	[illegible]	---	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	---	---	[illegible]	[illegible]	---	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	---	---	[illegible]	[illegible]	---	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	---	---	[illegible]	[illegible]	---	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31	---	---	[illegible]	[illegible]	---	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MONTH	---	---	---	---	---	---	---	---	---	---	[illegible]	[illegible]

09306222 PICEANCE CREEK AT WHITE RIVER, CO

LOCATION.--Lat 40°05'16", long 108°14'35", in SW¼NE¼ sec.2, T.1 N., R.97 W., Rio Blanco County, Hydrologic Unit 14050006, on left bank 900 ft upstream from mouth, 1.0 mi west of White River City, and 17 mi west of Meeker.

DRAINAGE AREA.--652 mi².

PERIOD OF RECORD.--October 1964 to September 1966, October 1970 to current year.

REVISED RECORDS.--WDR CO-82-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,705 ft above National Geodetic Vertical Datum of 1929, from topographic map. Oct. 1, 1964, to Sept. 30, 1966, and Oct. 1, 1970, to July 12, 1974, at several sites 1.1 mi upstream at different datums.

REMARKS.--Estimated daily discharges: Nov. 29 to Dec. 3, Dec. 8-5, and Dec. 18 to Mar. 24. Records fair except for estimated daily discharges, which are poor. Diversions for irrigation of about 5,500 acres upstream from station.

AVERAGE DISCHARGE.--21 years, 40.9 ft³/s; 29,630 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 628 ft³/s, Sept. 7, 1978, gage height, 7.04 ft, on basis of slope-area measurement of peak flow; minimum daily, 0.50 ft³/s, July 21-22, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 9	----	a*140	----	No other peak greater than base discharge.			

Minimum daily, 1.6 ft³/s, July 17.
a Mean daily discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	[illegible]	[illegible]	[illegible]	26	32	32	59	15	2.6	3.5	3.3	15
2	[illegible]	[illegible]	[illegible]	25	31	33	61	14	2.5	3.7	4.5	13
3	[illegible]	[illegible]	30	24	30	37	62	13	2.6	3.9	3.1	13
4	[illegible]	[illegible]	38	23	28	31	59	12	2.7	4.4	2.4	14
5	[illegible]	[illegible]	[illegible]	[illegible]	26	27	58	12	3.3	4.1	2.5	17
6	[illegible]	[illegible]	[illegible]	[illegible]	24	31	53	12	2.4	3.9	2.3	15
7	[illegible]	28	[illegible]	26	27	34	52	11	3.3	4.2	2.1	14
8	[illegible]	[illegible]	[illegible]	24	30	90	58	9.6	3.0	4.3	2.2	16
9	[illegible]	31	[illegible]	[illegible]	24	140	59	9.5	3.5	4.1	2.5	17
10	[illegible]	[illegible]	[illegible]	[illegible]	28	125	60	8.3	[illegible]	4.2	3.2	15
11	[illegible]	29	[illegible]	23	30	110	57	7.3	2.8	3.9	17	14
12	[illegible]	[illegible]	[illegible]	26	27	83	55	7.8	3.1	4.5	15	16
13	[illegible]	31	31	24	[illegible]	84	51	7.0	3.8	4.1	16	21
14	[illegible]	[illegible]	31	20	[illegible]	92	48	6.5	3.7	2.7	13	21
15	[illegible]	[illegible]	31	[illegible]	28	80	48	6.2	2.2	1.8	9.4	20
16	[illegible]	31	[illegible]	[illegible]	[illegible]	74	47	6.7	3.1	2.1	10	18
17	26	[illegible]	[illegible]	[illegible]	[illegible]	72	43	6.0	3.0	1.6	10	18
18	27	34	43	27	27	60	42	5.8	3.1	1.8	10	18
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	72	40	5.4	3.2	1.7	9.8	19
20	24	[illegible]	[illegible]	[illegible]	[illegible]	73	35	5.2	2.8	1.7	13	18
21	[illegible]	31	[illegible]	[illegible]	[illegible]	66	29	5.3	3.1	1.9	12	18
22	27	34	33	30	27	68	27	5.1	3.3	1.9	12	15
23	26	38	[illegible]	32	28	58	25	4.9	3.5	4.4	9.9	15
24	24	39	32	24	27	70	24	4.8	4.0	5.6	11	12
25	25	31	31	22	36	73	23	4.8	4.0	3.5	13	13
26	27	37	37	20	38	73	19	4.7	3.9	3.1	17	10
27	[illegible]	37	36	24	36	69	13	4.7	4.2	3.3	19	9.7
28	24	37	36	22	32	63	14	4.5	4.1	3.7	20	9.6
29	[illegible]	37	[illegible]	24	---	60	14	4.2	4.2	4.3	19	9.6
30	24	36	25	26	---	58	16	3.1	3.9	4.0	19	9.3
31	24	---	27	30	---	56	---	2.7	---	3.5	19	---
TOTAL	[illegible]	969	959	718	805	2101	1250	230.0	98.1	105.5	327.2	453.7
MEAN	24.4	32.3	30.9	23.2	28.7	67.8	41.7	7.42	3.27	3.40	10.6	15.1
MAX	29	39	38	30	38	140	62	15	4.2	5.6	20	21
MIN	22	24	25	19	24	27	13	2.7	2.3	1.6	2.1	9.6
AC-FT	1500	1920	1900	1420	1600	4170	2480	456	195	209	649	900

CAL YR 1988 TOTAL 11640.1 MEAN 31.8 MAX 103 MIN 3.6 AC-FT 23090
WTR YR 1989 TOTAL 8762.5 MEAN 24.0 MAX 140 MIN 1.6 AC-FT 17380

09306224 WHITE RIVER ABOVE CROOKED WASH, NEAR WHITE RIVER CITY, CO

LOCATION.--Lat 40°09'44", long 108°20'33", in NW¼NW¼ sec.12, T.2 N., R.98 W., Rio Blanco county, Hydrologic Unit 14050005, on right bank 15 ft upstream from County Road 77 bridge, 2.8 mi upstream from Crooked Wash, 9.8 mi downstream from Piceance Creek and 8.0 mi northwest of White River City.

DRAINAGE AREA.--1,821 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1982 to September 1989 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 5,590 ft above National Geodetic Vertical Datum of 1929, from topographic map. Oct. 1, 1982 to Aug. 15, 1983, at site 0.25 mi upstream, at datum 3.12 ft, higher.

REMARKS.--Estimated daily discharges: Dec. 15 to Mar. 15. Records fair except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 31,900 acres.

AVERAGE DISCHARGE.--7 years, 945 ft³/s; 684,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,370 ft³/s, June 7, 1984, gage height, 8.05 ft; minimum daily, 132 ft³/s, Sept. 7, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,470 ft³/s at 1300 May 12, gage height, 4.44 ft; maximum gage height, 5.72 ft, Feb. 10 (backwater from ice); minimum daily discharge, 132 ft³/s, Sept. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	447	432	428	392	368	381	564	852	1230	413	418	195
2	436	440	415	399	348	393	597	785	1160	392	429	247
3	415	444	427	422	334	400	578	749	1110	385	436	193
4	422	449	430	394	313	363	586	751	1030	354	393	163
5	431	444	425	428	263	422	554	745	985	355	396	164
6	446	442	415	460	264	585	533	755	939	365	394	148
7	439	439	413	422	283	731	546	864	951	347	391	132
8	442	446	470	363	336	621	583	1020	887	319	383	152
9	436	503	397	357	397	573	615	1160	900	336	377	182
10	432	484	432	406	455	683	610	1230	856	330	369	161
11	431	487	386	445	442	679	589	1330	913	334	387	171
12	422	493	392	370	411	668	568	1390	971	368	423	201
13	427	472	407	309	373	761	569	1320	942	377	500	273
14	428	480	402	292	368	695	600	1160	873	382	459	301
15	429	496	400	436	356	536	645	1090	873	336	452	301
16	421	468	370	387	355	597	687	862	860	312	450	295
17	423	413	356	366	367	639	748	818	892	290	438	288
18	416	419	382	349	355	600	859	766	865	275	432	286
19	411	419	429	360	357	611	929	820	774	234	445	280
20	413	390	422	370	353	649	965	924	706	211	487	302
21	418	399	401	381	347	569	1070	1050	666	190	450	346
22	418	409	399	381	322	555	1210	1160	659	189	413	326
23	419	416	376	381	394	570	1220	1260	632	203	383	307
24	408	443	371	339	394	580	1280	1360	582	332	330	305
25	410	438	369	318	407	608	1270	1280	551	315	296	314
26	404	424	382	296	413	616	1230	1100	536	318	288	325
27	404	413	363	286	392	601	1150	952	501	318	303	303
28	408	382	303	328	374	574	1050	991	457	319	302	304
29	409	405	302	385	---	571	982	1250	450	379	254	304
30	428	432	376	418	---	580	900	1340	433	442	244	300
31	433	---	378	418	---	536	---	1320	---	406	229	---
TOTAL	13126	13221	12218	11658	10141	17944	24287	32454	24154	10126	11951	7569
MEAN	423	441	394	376	362	579	810	1047	805	327	386	252
MAX	447	503	470	460	455	761	1280	1390	1230	442	500	346
MIN	404	382	302	286	263	363	533	745	433	189	229	132
AC-FT	26040	26220	24230	23120	20110	35590	48170	64370	47910	20080	23700	15010

CAL YR 1988 TOTAL 233178 MEAN 637 MAX 2860 MIN 280 AC-FT 462500
WTR YR 1989 TOTAL 188849 MEAN 517 MAX 1390 MIN 132 AC-FT 374600

09306224 WHITE RIVER ABOVE CROOKED WASH NEAR WHITE RIVER CITY,CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to September 1989, (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
NOV									
09...	1300	527	650	8.4	7.0	10.8	290	70	27
JUN									
22...	1305	820	540	8.5	14.5	9.2	240	64	20

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV									
09...	41	1	1.4	180	180	9.5	0.2	13	451
JUN									
22...	22	0.6	1.3	169	110	6.8	0.2	14	340

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
NOV								
09...	0.61	642	<0.01	<0.1	<0.01	<0.2	0.01	<0.01
JUN								
22...	0.46	752	<0.01	<0.1	0.02	0.30	0.03	0.02

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT				
14...	1012	427	676	11.0
DEC				
05...	1514	431	702	11.0
MAR				
07...	1510	649	867	6.0
17...	1015	649	867	6.0
APR				
14...	0950	579	763	8.0

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
MAY				
09...	1020	1250	408	19.0
15...	0940	1250	454	10.0
30...	1014	1600	423	15.0
JUL				
05...	1140	360	728	25.0

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
09...	1300	527	70	100	73
JUN					
22...	1305	820	13	29	71

09306235 CORRAL GULCH BELOW WATER GULCH, NEAR RANGELY, CO

LOCATION.--Lat 39°54'22", long 108°31'56", in SE¼NW¼ sec.5, T.2 S., R.99 W., Rio Blanco County, Hydrologic Unit 14050006, on left bank 0.1 mi downstream from Water Gulch and 19 mi southeast of Rangely.

DRAINAGE AREA.--8.61 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1974 to September 1989 (discontinued).

GAGE.--Water-stage recorder. Concrete control since Aug. 1, 1974. Prior to Aug. 1, 1974, water-stage recorder at different datum. Elevation of gage is 6,975 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 16-18, 29, 30, and Mar. 4-5. Records good except those above 28 ft³/s, which are fair, and estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--15 years, 0.99 ft³/s; 717 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge determined, 272 ft³/s, July 23, 1977, gage height, 3.20 ft, maximum gage height, 13.50 ft, May 31, 1983 (from mud flow); no flow many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4.5 ft³/s at 1030 Nov. 12, gage height, 1.55 ft; minimum daily, 0.08 ft³/s, Feb. 5-7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.46	.45	.31	.26	.15	.20	.34	.21	.34	.23	.32	.30
2	.45	.45	.31	.25	.15	.17	.31	.21	.36	.22	.35	.30
3	.44	.44	.31	.25	.11	.14	.32	.21	.36	.22	.28	.30
4	.45	.44	.31	.24	.09	.18	.38	.21	.33	.21	.28	.31
5	.46	1.1	.31	.22	.08	.20	.30	.22	.36	.22	.28	.31
6	.45	.42	.31	.21	.08	.22	.30	.22	.36	.21	.28	.30
7	.43	.46	.31	.19	.08	.24	.26	.22	.33	.22	.28	.30
8	.42	.44	.31	.17	.09	.29	.24	.21	.29	.22	.28	.34
9	.42	.42	.46	.18	.11	.30	.24	.23	.29	.20	.28	.31
10	.42	.41	.31	.19	.13	.31	.23	.22	.29	.23	.29	.30
11	.42	.42	.33	.19	.15	.29	.25	.25	.30	.28	.30	.31
12	.42	.84	.33	.19	.15	.28	.25	.27	.29	.30	.33	.35
13	.45	.41	.31	.19	.14	.28	.27	.27	.30	.25	.30	.26
14	.46	.42	.31	.19	.12	.31	.24	.28	.31	.27	.28	.27
15	.46	.40	.31	.19	.12	.36	.24	.27	.31	.28	.29	.27
16	.46	.60	.31	.19	.14	.46	.24	.31	.30	.26	.29	.26
17	.45	.37	.28	.19	.14	.28	.23	.28	.33	.26	.30	.26
18	.44	.38	.28	.19	.15	.34	.21	.27	.33	.26	.29	.22
19	.44	.49	.28	.19	.15	.30	.21	.27	.29	.26	.32	.21
20	.44	.52	.28	.18	.14	.28	.21	.27	.29	.26	.31	.28
21	.43	.47	.24	.18	.12	.35	.21	.27	.28	.27	.33	.23
22	.42	.47	.27	.18	.13	.31	.21	.26	.27	.30	.32	.21
23	.42	.46	.27	.17	.16	.30	.21	.28	.28	.30	.32	.21
24	.42	.41	.26	.17	.17	.29	.21	.28	.27	.30	.31	.20
25	.42	.37	.27	.15	.19	.28	.21	.30	.27	.32	.31	.20
26	.42	.34	.23	.16	.20	.30	.22	.31	.27	.32	.31	.19
27	.42	.34	.25	.16	.21	.32	.24	.31	.27	.34	.31	.19
28	.41	.34	.25	.16	.20	.31	.24	.30	.28	.33	.31	.19
29	.42	.32	.28	.15	---	.28	.22	.30	.27	.34	.31	.18
30	.43	.31	.28	.15	---	.36	.21	.32	.25	.31	.31	.18
31	.45	---	.28	.15	---	.35	---	.33	---	.31	.31	---
TOTAL	13.50	13.71	9.15	5.83	3.85	8.88	7.46	8.16	9.07	8.30	9.38	7.74
MEAN	.44	.46	.30	.19	.14	.29	.25	.26	.30	.27	.30	.26
MAX	.46	1.1	.46	.26	.21	.46	.38	.33	.36	.34	.35	.35
MIN	.41	.31	.23	.15	.08	.14	.21	.21	.25	.20	.28	.18
AC-FT	27	27	18	12	7.6	18	15	16	18	16	19	15

CAL YR 1988 TOTAL 237.04 MEAN .65 MAX 2.1 MIN .23 AC-FT 470
WTR YR 1989 TOTAL 105.03 MEAN .29 MAX 1.1 MIN .08 AC-FT 208

09306235 CORRAL GULCH BELOW WATER GULCH, NEAR RANGELY, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1974 to September 1989, (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1974 to September 1985.
WATER TEMPERATURE: April 1974 to September 1985.
SUSPENDED-SEDIMENT DISCHARGE: October 1974 to September 1982.

INSTRUMENTATION.--Water-quality monitor April 1974 to September 1985. Pumping sediment sampler October 1974 to September 1982.

REMARKS.--Unpublished maximum and minimum specific conductance data for period of daily record available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 6,490 microsiemens Dec. 19, 1981; minimum, 230 microsiemens Mar. 20, 1978.
WATER TEMPERATURES: Maximum, 33.5°C June 11, 1981; minimum, freezing point many days during winter months each year.
SEDIMENT CONCENTRATIONS: Maximum daily, 17,800 mg/L July 26, 1981; no flow many days during 1974-78, 1981.
SEDIMENT LOADS: Maximum daily, 162 tons May 20, 1979; no flow many days during 1974-78, Dec. 15, 1979, 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
NOV										
08...	1255	0.61	1390	8.3	4.5	10.2	590	110	77	110

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV										
08...	2	1.2	311	<0.5	460	17	0.2	20	1050	1000

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
NOV									
08...	1.43	1.73	<0.01	3.60	0.04	0.20	0.01	2200	7.2

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT				
04...	1036	0.45	1480	11.5
DEC				
07...	1155	0.30	1430	2.0
JAN				
18...	1116	0.15	1490	1.5
FEB				
22...	1215	0.17	1380	--
MAR				
21...	1035	0.34	1340	11.0
MAY				
04...	1315	0.22	1380	18.0
JUN				
01...	1215	0.30	1400	22.0
JUL				
06...	1352	0.19	1340	30.0
AUG				
15...	1328	0.26	1420	27.0

09306242 CORRAL GULCH NEAR RANGELY, CO

LOCATION.--Lat 39°55'13", long 108°28'20", in SE¼NW¼ sec.35, T.1 S., R.99 W., Rio Blanco County, Hydrologic Unit 14050006, on left bank 5 ft downstream from Boxelder Creek, and 3.5 mi upstream from confluence with Stake Springs Draw, and 21 mi southeast of Rangely.

DRAINAGE AREA.--31.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1974 to current year.

GAGE.--Water-stage recorder. Concrete control since July 20, 1974. Elevation of gage is 6,570 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No diversions upstream from station.

AVERAGE DISCHARGE.--15 years, 2.65 ft³/s; 1,920 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,780 ft³/s, Aug. 18, 1984, gage height, 6.12 ft, from rating curve extended above 70 ft³/s, on basis of slope-area measurements at gage heights 3.89 ft, 4.08 ft, and 6.12 ft; minimum daily, 0.06 ft³/s, Apr. 10-14, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35 ft³/s at 2345 July 28, gage height, 2.69 ft; minimum daily, 0.47 ft³/s, July 6, and 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.4	1.1	.78	.77	.77	.71	.67	.63	.48	.61	.57
2	1.1	1.4	1.1	.79	.77	.78	.68	.68	.64	.48	.72	.58
3	1.1	1.4	1.1	.79	.77	.78	.68	.67	.65	.48	.65	.58
4	1.1	1.5	1.1	.79	.78	.76	.66	.67	.65	.48	.66	.59
5	1.1	1.4	1.1	.79	.75	.76	.66	.65	.64	.48	.64	.59
6	1.1	1.4	1.0	.80	.73	.77	.73	.64	.65	.47	.65	.58
7	1.2	1.4	1.0	.79	.72	.81	.79	.63	.59	.48	.65	.58
8	1.1	1.5	.92	.79	.72	1.0	.79	.63	.56	.49	.65	.66
9	1.2	1.5	.91	.80	.72	1.3	.76	.62	.57	.48	.65	.58
10	1.2	1.4	.93	.79	.74	1.0	.76	.62	.54	.47	.69	.58
11	1.2	1.6	.93	.78	.74	.78	.76	.64	.54	.50	.69	.59
12	1.3	1.4	.92	.77	.74	.72	.76	.65	.55	.51	.71	.74
13	1.3	1.6	.94	.79	.74	.68	.74	.66	.53	.52	.69	.61
14	1.2	1.5	.91	.78	.74	.67	.74	.68	.53	.52	.77	.60
15	1.2	1.4	.86	.76	.74	.67	.76	.67	.53	.51	.73	.60
16	1.2	1.3	.87	.77	.74	.66	.75	.67	.52	.52	.67	.59
17	1.2	1.3	.86	.77	.74	.65	.75	.66	.52	.52	.68	.59
18	1.3	1.3	.85	.76	.73	.68	.75	.65	.51	.53	.68	.58
19	1.2	1.2	.87	.76	.73	.70	.76	.64	.48	.54	.76	.57
20	1.2	1.2	.82	.77	.69	.71	.75	.64	.48	.55	.80	.61
21	1.2	1.2	.80	.77	.69	.70	.75	.63	.49	.57	.73	.61
22	1.2	1.3	.79	.78	.69	.69	.76	.62	.50	.60	.71	.60
23	1.2	1.3	.80	.76	.70	.68	.76	.62	.51	.68	.67	.61
24	1.2	1.3	.79	.79	.70	.67	.74	.62	.51	.65	.65	.60
25	1.2	1.3	.80	.77	.73	.67	.73	.62	.50	.65	.66	.59
26	1.3	1.3	.79	.79	.74	.68	.67	.63	.51	.66	.65	.59
27	1.3	1.2	.78	.78	.73	.72	.70	.63	.50	.69	.65	.60
28	1.3	1.2	.78	.76	.78	.69	.69	.62	.50	1.7	.63	.58
29	1.3	1.2	.76	.76	---	.69	.69	.61	.50	.84	.62	.57
30	1.3	1.2	.76	.77	---	.70	.70	.62	.49	.63	.59	.58
31	1.4	---	.76	.77	---	.70	---	.62	---	.60	.57	---
TOTAL	37.5	40.6	27.70	24.12	20.56	23.24	21.93	19.88	16.32	18.28	20.88	17.90
MEAN	1.21	1.35	.89	.78	.73	.75	.73	.64	.54	.59	.67	.60
MAX	1.4	1.6	1.1	.80	.78	1.3	.79	.68	.65	1.7	.80	.74
MIN	1.1	1.2	.76	.76	.69	.65	.66	.61	.48	.47	.57	.57
AC-FT	74	81	55	48	41	46	43	39	32	36	41	36

CAL YR 1988 TOTAL 665.95 MEAN 1.82 MAX 6.5 MIN .76 AC-FT 1320
WTR YR 1989 TOTAL 288.91 MEAN .79 MAX 1.7 MIN .47 AC-FT 573

09306242 CORRAL GULCH NEAR RANGELY, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1975 to September 1989, (discontinued).
WATER TEMPERATURE: January 1975 to September 1989, (discontinued).
SUSPENDED-SEDIMENT DISCHARGE: October 1974 to September 1985.

INSTRUMENTATION.--Water-quality monitor October 1974 to August 1989. Pumping sediment sampler October 1974 to September 1985.

REMARKS.--The water quality monitor was vandalized August 15, 1989, no subsequent data. Unpublished maximum and minimum specific conductance data for period of daily record available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 3,000 microsiemens July 17, 1976; minimum, 271 microsiemens Feb. 18, 1980.
WATER TEMPERATURES: Maximum, 29.0°C Aug. 5, 1979; minimum, 0.0°C on several days during winter months some years.
SEDIMENT CONCENTRATIONS: Maximum daily, 35,800 mg/L Aug. 2, 1982; minimum daily, 2 mg/L May 24, 1981.
SEDIMENT LOADS: Maximum daily, 43,600 tons August 18, 1984; minimum daily, 0.00 ton on many days during 1981.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Not determined.
WATER TEMPERATURES: Not determined.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
NOV										
08...	1425	1.6	1470	7.8	5.5	8.0	580	97	82	130

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV										
08...	2	1.6	395	<0.5	450	16	0.3	19	1060	1040

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
NOV									
08...	1.44	4.58	<0.01	1.30	0.02	<0.2	0.02	2400	6.1

09306242 CORRAL GULCH NEAR RANGELY, CO--Continued

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1560	1570	1610	1670	---	---	---	---	1690	1620	1480	---
2	1560	1540	1630	1640	---	---	---	---	1660	1610	1460	---
3	1560	1560	1590	1640	---	---	---	---	1670	1600	1480	---
4	1570	1560	1590	1630	---	---	---	---	1670	1590	1490	---
5	1580	1570	1570	1650	---	---	---	---	1660	1570	1500	---
6	1570	1570	1580	1630	---	---	---	1690	1680	1540	1500	---
7	1570	1530	1630	1630	---	---	---	1690	1670	1560	1530	---
8	1570	1530	1690	1630	---	---	---	1690	1650	1570	1530	---
9	1590	1540	1670	1640	---	---	---	1710	1640	1540	1550	---
10	1600	1530	1670	1640	---	---	---	1720	1650	1540	1510	---
11	1580	1520	1660	1660	---	---	---	1720	1670	1560	1500	---
12	1590	1570	1660	1660	---	---	---	1730	1660	1600	1490	---
13	1580	1530	1650	1650	---	---	---	1710	1650	1580	1520	---
14	1580	1520	1660	1640	---	---	---	1700	1650	1540	1560	---
15	1580	1560	1670	1650	---	---	---	1700	1630	1540	---	---
16	1580	1560	1670	1630	---	---	---	1700	1610	1550	---	---
17	1580	1530	1670	1630	---	---	---	1690	1630	1540	---	---
18	1580	1620	1680	1630	---	---	---	1690	1640	1510	---	---
19	1590	1600	1680	1640	---	---	---	1700	1620	1520	---	---
20	1550	1590	1680	1640	---	---	---	1720	1620	1520	---	---
21	1560	1560	1680	1640	---	---	---	1700	1680	1500	---	---
22	1570	1620	1700	1640	---	---	---	1710	1680	1530	---	---
23	1590	1600	1700	1640	---	---	---	1690	1660	1600	---	---
24	1560	1560	1720	1640	---	---	---	1710	1650	1510	---	---
25	1560	1580	1690	1670	---	---	---	1720	1640	1510	---	---
26	1570	1590	1720	1680	---	---	---	1700	1640	1510	---	---
27	1570	1620	1750	1670	---	---	---	1700	1630	1530	---	---
28	1560	1610	1750	1720	---	---	---	1700	1630	1530	---	---
29	1560	1620	1750	1700	---	---	---	1700	1630	1440	---	---
30	1560	1620	1710	1680	---	---	---	1700	1620	1480	---	---
31	1570	---	1720	1680	---	---	---	1690	---	1480	---	---

09306242 CORRAL GULCH NEAR RANGELY, CO--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.1	3.6	10.9	4.0	6.1	2.6	6.1	3.1	---	---	---	---
2	16.0	4.0	10.2	4.3	6.3	2.6	6.1	2.2	---	---	---	---
3	15.3	4.5	10.9	4.2	6.5	2.7	6.3	2.4	---	---	---	---
4	12.8	6.5	9.5	3.7	6.7	3.1	5.1	2.4	---	---	---	---
5	13.8	5.5	8.2	3.7	6.5	2.9	6.3	4.0	---	---	---	---
6	13.2	4.9	8.8	3.7	6.4	2.9	4.4	2.2	---	---	---	---
7	10.7	4.7	7.7	3.8	5.7	2.9	3.4	2.0	---	---	---	---
8	14.7	4.2	7.1	4.1	5.6	2.6	4.0	2.0	---	---	---	---
9	12.2	4.2	9.2	3.7	6.0	2.9	5.4	2.0	---	---	---	---
10	14.1	3.9	7.0	3.9	6.0	2.9	6.1	3.2	---	---	---	---
11	13.9	3.9	6.5	2.8	6.1	2.9	5.4	2.4	---	---	---	---
12	10.1	4.0	6.7	3.2	6.7	3.0	5.1	2.0	---	---	---	---
13	13.0	4.1	7.4	3.8	6.9	3.2	5.3	2.1	---	---	---	---
14	12.9	4.4	8.2	2.6	5.6	3.0	5.4	2.3	---	---	---	---
15	13.8	4.2	7.5	3.3	4.7	2.4	5.4	2.3	---	---	---	---
16	13.2	4.2	6.9	3.4	4.9	2.6	5.4	2.2	---	---	---	---
17	13.1	5.0	5.6	3.0	4.9	2.4	6.4	3.0	---	---	---	---
18	13.4	5.3	5.8	2.8	5.1	2.4	6.3	3.0	---	---	---	---
19	12.7	4.7	6.2	2.7	5.3	2.5	6.4	3.0	---	---	---	---
20	12.9	4.3	6.4	2.7	6.0	3.1	6.3	3.0	---	---	---	---
21	12.7	4.0	6.3	2.7	6.0	2.9	6.4	3.0	---	---	---	---
22	11.8	4.1	6.3	2.7	4.5	2.8	6.4	3.1	---	---	---	---
23	12.2	4.0	7.3	3.7	5.7	2.8	6.4	3.3	---	---	---	---
24	12.5	4.0	5.8	1.9	5.3	2.7	6.0	3.3	---	---	---	---
25	11.9	4.1	5.8	2.8	6.5	3.4	6.1	2.4	---	---	---	---
26	11.6	3.9	6.2	2.8	4.4	2.8	5.4	2.3	---	---	---	---
27	11.0	4.2	5.3	2.3	4.9	2.5	5.4	2.3	---	---	---	---
28	12.0	4.3	6.0	2.5	5.0	2.6	5.4	3.0	---	---	---	---
29	11.1	4.7	5.2	2.4	5.2	2.5	6.3	2.4	---	---	---	---
30	12.0	4.1	5.9	2.5	5.9	3.1	7.1	3.0	---	---	---	---
31	11.4	3.9	---	---	5.6	2.8	7.4	3.0	---	---	---	---
MONTH	16.1	3.6	10.9	1.9	6.9	2.4	7.4	2.0	---	---	---	---

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	17.9	5.4	20.1	7.0	18.5	12.0	---	---
2	---	---	---	---	18.2	5.8	20.3	6.8	18.7	12.3	---	---
3	---	---	---	---	15.2	6.3	21.1	7.2	18.4	10.3	---	---
4	---	---	---	---	18.3	6.4	20.5	7.2	18.3	11.7	---	---
5	---	---	---	---	18.3	6.5	20.5	7.6	19.0	10.5	---	---
6	---	---	17.1	5.4	15.3	7.6	20.3	8.3	19.5	10.0	---	---
7	---	---	16.2	5.9	19.5	6.4	19.5	8.7	20.3	10.1	---	---
8	---	---	17.5	7.2	15.3	8.1	19.8	8.7	20.4	10.9	---	---
9	---	---	17.8	6.5	17.0	5.9	20.7	9.3	16.7	11.9	---	---
10	---	---	15.7	6.4	18.1	7.3	19.2	9.8	18.9	10.5	---	---
11	---	---	15.1	4.9	19.1	7.1	19.1	10.3	18.3	11.6	---	---
12	---	---	12.4	4.8	17.5	9.0	18.3	10.9	17.9	11.9	---	---
13	---	---	16.0	5.1	17.8	7.7	20.3	9.8	20.2	10.4	---	---
14	---	---	13.3	5.5	20.0	6.7	19.6	8.9	17.5	10.0	---	---
15	---	---	13.9	5.2	20.6	7.4	18.6	8.4	---	---	---	---
16	---	---	14.4	6.2	19.2	8.4	19.8	8.0	---	---	---	---
17	---	---	15.9	5.8	19.5	7.6	19.7	7.6	---	---	---	---
18	---	---	17.8	5.3	20.9	7.1	20.1	8.3	---	---	---	---
19	---	---	17.4	5.7	19.6	7.9	21.4	8.0	---	---	---	---
20	---	---	18.3	4.3	17.8	8.6	21.4	8.7	---	---	---	---
21	---	---	16.1	6.8	17.4	6.4	20.1	9.1	---	---	---	---
22	---	---	18.4	5.7	18.9	4.8	20.2	10.4	---	---	---	---
23	---	---	16.7	6.5	14.7	7.7	20.1	11.2	---	---	---	---
24	---	---	16.7	5.9	19.0	7.6	19.5	9.3	---	---	---	---
25	---	---	17.0	6.1	19.0	7.4	19.4	9.1	---	---	---	---
26	---	---	17.4	4.7	19.6	6.8	21.1	9.3	---	---	---	---
27	---	---	17.2	5.0	18.9	6.7	19.7	10.1	---	---	---	---
28	---	---	17.8	6.0	19.0	7.9	18.6	10.0	---	---	---	---
29	---	---	17.7	6.1	20.0	7.5	20.3	11.2	---	---	---	---
30	---	---	17.0	6.2	19.6	7.2	23.4	10.2	---	---	---	---
31	---	---	17.9	5.4	---	---	24.0	10.1	---	---	---	---
MONTH	---	---	---	---	20.9	4.8	24.0	6.8	---	---	---	---

09306255 YELLOW CREEK NEAR WHITE RIVER, CO

LOCATION.--Lat 40°10'07", long 108°24'02", in NE¼SW¼ sec.4, T.2 N., R.98 W., Rio Blanco County, Hydrologic Unit 14050006, on left bank 160 ft downstream from bridge on State Highway 64, 0.3 mi upstream from mouth, and 10.0 mi northwest of White River City.

DRAINAGE AREA.--262 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to September 1982, May 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,535 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 25 to Feb. 15 and Aug. 9-12. Records fair except for estimated daily discharges and flows above 10 ft³/s, which are poor. Diversions upstream from station for irrigation of about 300 acres.

AVERAGE DISCHARGE.--11 years (water years 1973-82, 1989), 2.16 ft³/s; 1,560 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,800 ft³/s, Sept. 7, 1978, gage height, 12.97 ft, on basis of contracted opening and flow over road measurement of peak flow; no flow, Sept. 7-16, 1978, Dec. 15, 1978 to Jan. 14, 1979.

EXTREMES FOR CURRENT YEAR (MAY TO SEPTEMBER).--Peak discharges greater than base discharge of 100 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 9	0045	*120	*6.80	No other peak greater than base discharge.			

Minimum daily, 2.9 ft³/s, July 20-21, Aug. 15-16, Sept. 2, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	5.7	5.4	4.1	4.2	6.3	6.1	5.3	4.2	3.4	3.8	3.0
2	5.0	5.8	5.4	4.1	4.2	7.0	5.6	5.2	4.2	3.4	3.9	2.9
3	5.0	5.8	5.6	4.0	4.2	8.3	5.8	5.2	4.1	3.3	3.6	3.0
4	4.9	5.6	5.4	4.1	3.8	6.5	5.5	5.2	4.0	3.3	3.4	2.9
5	5.1	5.6	5.2	4.1	3.0	8.9	5.4	5.0	4.1	3.3	3.4	3.1
6	5.1	5.7	5.1	4.1	3.5	6.5	5.4	5.0	4.2	3.2	3.4	3.4
7	5.3	5.8	4.9	4.2	4.0	9.3	5.3	4.9	4.2	3.2	3.4	3.3
8	5.3	6.2	4.8	4.2	4.1	24	5.2	4.8	4.3	3.2	3.4	3.7
9	5.3	6.3	4.9	4.3	4.2	44	5.2	4.9	4.2	3.2	3.3	3.5
10	5.3	6.0	5.1	4.3	4.5	17	5.2	4.8	4.2	3.2	3.2	3.4
11	5.3	6.7	4.9	4.4	4.6	8.9	5.3	4.8	4.1	3.2	3.1	3.3
12	5.3	6.1	5.0	4.4	5.0	6.7	5.1	4.7	4.0	3.4	3.0	3.7
13	5.5	6.2	4.9	4.4	5.3	6.3	5.3	5.0	4.1	3.2	3.1	3.6
14	5.5	6.2	4.9	4.5	5.0	5.9	5.3	4.9	4.0	3.1	3.0	3.5
15	5.4	6.3	4.9	4.6	4.6	5.6	5.4	5.0	4.0	3.1	2.9	3.3
16	5.3	6.0	4.9	4.6	4.6	5.4	5.3	4.8	3.9	3.1	2.9	3.8
17	5.3	6.0	4.9	4.7	4.5	5.3	5.1	5.0	3.9	3.0	3.0	3.7
18	5.3	6.1	4.9	4.8	4.6	5.2	5.2	4.8	3.8	3.0	3.1	3.6
19	5.4	5.6	4.8	4.6	4.6	5.5	5.0	4.7	3.7	3.0	3.2	3.6
20	5.3	6.2	4.8	4.6	4.6	6.1	4.9	4.6	3.6	2.9	3.3	4.0
21	5.3	5.8	4.8	4.6	4.4	5.8	4.9	4.7	3.6	2.9	3.3	4.2
22	5.2	5.7	4.6	4.5	4.4	5.7	4.9	4.7	3.8	3.0	3.2	3.9
23	5.2	5.7	4.5	4.5	4.5	5.7	4.9	4.5	3.8	3.1	3.1	3.8
24	5.2	6.3	4.4	4.5	4.7	5.6	4.9	4.5	3.7	3.8	3.1	3.7
25	5.3	6.0	4.3	4.4	5.1	5.6	5.0	4.3	3.6	3.3	3.1	3.6
26	5.3	6.2	4.2	4.4	7.4	5.6	5.1	4.3	3.6	3.2	3.1	3.7
27	5.5	5.8	3.9	4.3	7.6	5.5	5.1	4.3	3.5	3.3	3.0	3.7
28	5.6	5.8	3.8	4.3	5.8	5.5	5.2	4.2	3.5	3.4	3.0	3.7
29	5.5	5.6	4.1	4.2	---	5.6	5.2	4.2	3.5	7.8	3.0	3.7
30	5.7	5.5	4.1	4.2	---	5.4	5.4	4.2	3.5	6.7	3.0	3.8
31	5.6	---	4.1	4.2	---	5.5	---	4.1	---	4.1	3.0	---
TOTAL	164.3	178.3	147.5	135.2	131.0	260.2	157.2	146.6	116.9	108.3	99.3	106.5
MEAN	5.30	5.94	4.76	4.36	4.68	8.39	5.24	4.73	3.90	3.49	3.20	3.55
MAX	5.7	6.7	5.6	4.8	7.6	44	6.1	5.3	4.3	7.8	3.9	4.2
MIN	4.9	5.5	3.8	4.0	3.0	5.2	4.9	4.1	3.5	2.9	2.9	2.9
AC-FT	326	354	293	268	260	516	312	291	232	215	197	211

WTR YR 1989 TOTAL 1751.4 MEAN 4.80 MAX 44 MIN 2.9 AC-FT 3470

09306255 YELLOW CREEK NEAR WHITE RIVER, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1974 to September 1982, March 1988 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1975 to September 1982.
WATER TEMPERATURE: April 1975 to September 1982.
SUSPENDED-SEDIMENT DISCHARGE: April 1974 to September 1982.

INSTRUMENTATION.--Automatic pumping sediment sampler April 1974 to September 1982. Water-quality monitor April 1975 to September 1982.

REMARKS.--Unpublished maximum and minimum specific conductance data for the period of daily record are available in the district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum 5,790 microsiemens Sep. 17, 1978; minimum, 457 microsiemens July 21, 1979.
WATER TEMPERATURES: Maximum 35.0°C July 25, 1978; minimum, 0.0°C on many days during the winter period.
SEDIMENT CONCENTRATIONS: Maximum daily, 24,000 mg/L Sep. 07, 1978; minimum daily, no flow several days during Sep. 1978, many days during 1979.
SEDIMENT LOADS: Maximum daily, 290,000 tons Sep. 07, 1978; minimum daily, no flow several days during Sep. 1978, many days during 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
OCT 27...	1330	5.6	3140	8.6	10.0	11.6	920	66	180	500
MAR 06...	1230	5.4	3210	8.6	5.5	10.0	970	74	190	510
JUN 22...	1053	4.0	3310	8.7	14.0	10.5	810	58	160	550
AUG 31...	1405	2.4	3330	8.8	22.0	10.5	820	45	170	560

DATE	SODIUM AD-SORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
OCT 27...	7	2.7	765	1100	64	1.0	9.5	2410	3.26
MAR 06...	7	3.2	788	1100	60	0.9	19	2450	3.32
JUN 22...	9	2.8	858	1000	71	1.3	16	2390	3.25
AUG 31...	9	3.2	894	1000	78	1.3	7.0	2410	3.28

DATE	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	STRONTIUM, DISSOLVED (UG/L AS SR)
OCT 27...	36.4	0.02	3.40	<0.01	0.60	0.02	<0.01	460	8200
MAR 06...	35.7	0.02	2.70	0.09	1.0	0.07	0.05	420	5200
JUN 22...	25.8	0.02	2.90	0.01	1.1	0.01	<0.01	510	5100
AUG 31...	15.6	0.02	2.00	<0.01	0.60	<0.01	<0.01	530	4100

09306255 YELLOW CREEK NEAR WHITE RIVER, CO--Continued

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT				
13...	1453	5.3	3190	15.0
DEC				
08...	1052	4.8	3410	1.0
JAN				
03...	1030	4.1	3460	0.0
FEB				
13...	1015	8.1	3480	0.0
APR				
06...	1350	5.5	3370	18.0
MAY				
01...	0950	5.6	3550	10.0
JUN				
15...	1500	4.0	3410	28.0
JUL				
07...	1015	3.3	3030	20.0
AUG				
09...	1635	3.0	3260	20.0

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
27...	1330	5.6	61	0.92	31
MAR					
06...	1230	5.4	930	14	80
JUN					
22...	1053	4.0	105	1.1	38
AUG					
31...	1405	2.4	147	0.95	--

09306290 WHITE RIVER BELOW BOISE CREEK, NEAR RANGELY, CO

LOCATION.--Lat 40°10'47", long 108°33'53", in SW¼SE¼ sec.36, T.3 N., R.100 W., Rio Blanco County, Hydrologic Unit 14050007, on left bank 60 ft downstream from bridge on County Road 73, 0.5 mi below Boise Creek, and 16.4 mi east of Rangely.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--2,530 mi².

PERIOD OF RECORD.--August 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,395 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 10 to Mar. 22. Records fair except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 31,500 acres.

AVERAGE DISCHARGE.--7 years, 961 ft³/s; 696,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,440 ft³/s, June 7, 1984, gage height, 8.45 ft; minimum daily, 126 ft³/s, Sept. 7, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,580 ft³/s at 1545 May 2, gage height, 4.73 ft; minimum daily, 126 ft³/s, Sept. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	484	421	437	400	376	389	580	880	1320	435	406	172
2	471	421	423	407	355	401	630	809	1250	399	436	236
3	444	426	436	431	341	409	608	754	1200	396	454	233
4	441	427	439	402	319	370	613	746	1120	367	383	140
5	449	431	434	437	268	431	589	751	1060	353	372	155
6	473	431	423	469	269	597	582	749	1000	354	373	148
7	475	432	421	431	289	746	554	850	1030	367	278	126
8	477	426	480	370	343	614	590	1030	952	303	359	152
9	466	476	405	364	405	585	628	1150	966	353	349	231
10	457	436	441	414	464	694	643	1270	899	339	329	195
11	459	461	394	454	451	593	610	1330	960	347	349	187
12	450	500	400	378	419	612	630	1480	1060	403	391	204
13	453	440	415	315	331	777	583	1430	1070	418	536	302
14	445	446	410	298	376	710	588	1230	948	452	483	328
15	447	460	408	445	363	547	623	1180	940	386	459	312
16	445	461	377	395	362	603	684	957	919	338	464	290
17	441	421	363	373	374	626	755	887	947	318	454	281
18	432	478	390	356	362	580	892	825	965	305	442	270
19	420	428	438	367	364	610	999	824	841	265	449	262
20	414	398	431	378	360	621	1040	949	748	229	513	287
21	416	407	409	389	354	525	1120	1070	689	205	490	382
22	411	417	407	389	329	571	1220	1190	694	200	437	361
23	410	424	384	400	402	611	1250	1290	653	202	436	327
24	411	452	379	346	402	674	1290	1380	622	373	322	317
25	410	447	377	324	415	637	1310	1320	589	387	280	319
26	403	433	390	302	420	640	1320	1150	577	374	264	348
27	394	422	370	292	400	623	1230	990	541	363	279	318
28	387	390	303	335	382	601	1120	1010	485	353	344	312
29	392	413	302	393	---	579	1020	1240	473	442	226	308
30	413	441	376	427	---	596	931	1370	468	657	229	304
31	425	---	386	427	---	566	---	1410	---	443	220	---
TOTAL	13515	13076	12449	11908	10347	18258	25179	33581	25986	11126	11876	7937
MEAN	436	436	402	384	370	589	839	1083	866	359	383	260
MAX	484	500	480	469	464	777	1320	1480	1320	657	536	382
MIN	387	390	302	292	268	370	554	746	468	200	220	126
AC-FT	26810	25940	24690	23620	20520	36210	49940	66610	51540	22070	23560	15490

CAL YR 1988 TOTAL 248208 MEAN 678 MAX 2740 MIN 218 AC-FT 492300
WTR YR 1989 TOTAL 195107 MEAN 535 MAX 1480 MIN 126 AC-FT 387000

09306290 WHITE RIVER BELOW BOISE CREEK NEAR RANGELY, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
NOV 15...	1045	419	745	8.4	3.5	10.8	310	71	31	52
MAR 23...	1130	588	960	8.6	6.0	9.7	370	83	40	73
JUN 21...	1205	675	550	8.7	14.5	9.1	240	64	20	25
AUG 31...	0900	275	850	8.5	15.0	8.0	320	72	33	67

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)
NOV 15...	1	1.6	194	200	12	0.2	12	497	0.67	563
MAR 23...	2	2.4	225	290	18	0.3	15	659	0.90	1050
JUN 21...	0.7	1.4	169	110	8.0	0.2	15	346	0.47	630
AUG 31...	2	1.7	208	230	15	0.3	12	556	0.76	413

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS HYDRO. + ORTHO DIS. (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
NOV 15...	<0.01	<0.1	0.02	<0.2	0.01	<0.01	<0.01	50	29	1.6
MAR 23...	<0.01	0.35	0.02	0.30	0.02	0.02	0.01	--	11	3.2
JUN 21...	<0.01	<0.1	0.01	1.1	<0.01	0.02	<0.01	30	35	3.6
AUG 31...	<0.01	<0.1	<0.01	<0.2	<0.01	<0.01	<0.01	70	13	4.4

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ANTI-MONY, DIS-SOLVED (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)
NOV 15...	<0.1	<0.01	--	0.30	0.02	<0.01	390	30	<1	1	1
JUN 21...	<0.1	0.21	2.0	2.2	0.23	0.07	1000	30	1	1	1

09306290 WHITE RIVER BELOW BOISE CREEK NEAR RANGELY, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
NOV											
15...	100	25	<10	<0.5	1	<1	2	<1	1	<1	9
JUN											
21...	<100	32	<10	<0.5	<1	<1	9	1	1	<1	3

DATE	COPPER, DIS-SOLVED (UG/L AS CU)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)
NOV										
15...	11	<5	<5	20	50	8	<0.1	0.1	<1	2
JUN										
21...	2	3	1	10	40	7	<0.1	<0.1	1	1

DATE	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)
NOV										
15...	6	2	2	2	<1.0	930	10	9	3.0	<0.01
JUN										
21...	4	<1	1	1	<1.0	580	<10	6	3.7	<0.01

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT				
13...	1055	449	704	10.0
DEC				
05...	1117	468	745	3.0
APR				
10...	1450	630	--	9.5
MAY				
11...	1452	1380	403	15.0
JUN				
16...	1246	827	527	--
JUL				
05...	1440	345	767	26.0
AUG				
03...	1540	430	740	23.0
21...	1100	500	729	--

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
15...	1045	419	55	62	63
MAR					
23...	1130	588	314	499	85
MAY					
11...	1452	1380	653	2430	48
JUN					
16...	1246	827	134	299	53
21...	1205	675	37	67	49
AUG					
03...	1540	430	297	345	92
31...	0900	275	41	30	72

09339900 EAST FORK SAN JUAN RIVER ABOVE SAND CREEK, NEAR PAGOSA SPRINGS, CO

LOCATION.--Lat 37°23'23", long 106°50'26", Archuleta County, Hydrologic Unit 14080101, on right bank 0.3 mi upstream from Sand Creek, 4.0 mi upstream from West Fork San Juan River, and 13 mi northeast of Pagosa Springs.

DRAINAGE AREA.--64.1 mi².

PERIOD OF RECORD.--October 1956 to current year. Prior to October 1959, published as San Juan River above Sand Creek, near Pagosa Springs.

REVISED RECORDS.--WSP 1713: 1957.

GAGE.--Water-stage recorder. Elevation of gage is 8,900 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 9-14, and Nov. 18 to Mar. 21. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 500 acres of hay meadows upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--33 years, 89.5 ft³/s; 64,840 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,260 ft³/s, Sept. 14, 1970, gage height, 6.75 ft, from rating curve extended above 460 ft³/s, on basis of slope-area measurement at gage height, 6.13 ft; minimum daily determined, 3.4 ft³/s, Dec. 26, 1958.

EXTREMES OUTSIDE PERIOD OF RECORD.--Greatest flood since at least 1885 occurred Oct. 5, 1911.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 29	2200	*425	*4.22				

Minimum daily, 4.8 ft³/s, Feb. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	14	11	9.0	9.0	22	93	111	283	74	120	17
2	18	14	12	8.5	9.0	22	86	109	262	70	101	17
3	18	13	13	9.0	9.0	20	85	111	242	65	75	16
4	17	13	13	10	5.5	20	87	124	215	62	62	32
5	18	12	13	11	4.8	19	93	147	210	59	54	40
6	20	12	12	10	5.5	18	119	177	218	55	48	23
7	20	12	13	9.0	6.0	20	157	221	206	54	44	19
8	19	12	13	9.0	8.0	30	186	277	206	52	40	19
9	18	11	11	9.0	9.0	40	206	332	182	47	38	18
10	18	10	11	9.5	11	55	202	392	172	48	42	17
11	17	12	11	10	12	70	181	341	172	52	42	17
12	17	10	10	10	14	75	160	291	181	53	38	17
13	17	10	11	9.5	12	70	143	255	166	45	39	26
14	16	11	12	9.0	12	65	150	227	158	42	41	21
15	16	16	11	9.5	11	60	163	179	157	38	35	18
16	16	13	10	9.0	11	60	178	158	175	36	35	17
17	16	13	10	9.0	11	70	201	143	187	33	32	16
18	15	12	10	9.5	12	65	222	142	187	32	48	19
19	15	11	11	9.5	12	70	242	168	184	30	39	18
20	15	9.5	11	9.0	13	70	265	225	172	29	34	109
21	15	8.0	10	9.0	11	60	293	281	155	30	30	46
22	14	9.5	9.0	9.5	11	61	306	314	129	32	28	35
23	14	12	8.5	10	12	71	306	349	112	48	25	31
24	14	13	9.0	10	14	80	282	381	106	69	23	28
25	14	12	8.5	9.5	16	89	266	346	101	61	22	25
26	14	11	7.5	9.0	19	89	241	307	92	91	20	22
27	14	10	7.5	10	24	79	194	298	88	85	19	21
28	14	8.0	8.0	11	24	83	170	334	83	69	20	20
29	14	9.0	8.5	11	---	102	145	374	79	59	18	19
30	14	9.5	10	9.5	---	94	124	376	79	54	18	18
31	14	---	10	9.5	---	92	---	321	---	58	18	---
TOTAL	499	342.5	325.5	296.0	327.8	1841	5546	7811	4959	1632	1248	761
MEAN	16.1	11.4	10.5	9.55	11.7	59.4	185	252	165	52.6	40.3	25.4
MAX	20	16	13	11	24	102	306	392	283	91	120	109
MIN	14	8.0	7.5	8.5	4.8	18	85	109	79	29	18	16
AC-FT	990	679	646	587	650	3650	11000	15490	9840	3240	2480	1510

CAL YR 1988 TOTAL 19161.5 MEAN 52.4 MAX 341 MIN 7.5 AC-FT 38010
WTR YR 1989 TOTAL 25588.8 MEAN 70.1 MAX 392 MIN 4.8 AC-FT 50760

09342500 SAN JUAN RIVER AT PAGOSA SPRINGS, CO

LOCATION.--Lat 37°15'58", long 107°00'37", in NE¼SW¼ sec.13, T.35 N., R.2 W., Archuleta County, Hydrologic Unit 14080101, on right bank at former bridge site in Pagosa Springs, 0.2 mi upstream from McCabe Creek, 0.6 mi downstream from bridge on U.S. Highway 160, and 2.0 mi upstream from Mill Creek.

DRAINAGE AREA.--298 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1910 to December 1914, May 1935 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1313: 1914(M).

GAGE.--Water-stage recorder. Datum of gage is 7,052.04 ft above National Geodetic Vertical Datum of 1929. Jan 29 to Mar. 6, 1911, nonrecording gage at site 0.5 mi upstream, at different datum. Mar. 7 to Oct. 4, 1911, nonrecording gage at present site, at different datum. Nov. 23, 1911, to Nov. 14, 1914, nonrecording gage at site 300 ft downstream, at different datum.

REMARKS.--Estimated daily discharges: Dec. 15-19, 23, 25, 26, 29, Jan. 1-3, 12, 20-22, 24-26, and Feb. 1-4. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of large areas upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--58 years, 380 ft^3/s; 275,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft^3/s, Oct. 5, 1911, gage height, 17.8 ft, from floodmarks, from velocity-area study; minimum daily, 9.7 ft^3/s, Oct. 5-6, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1885, that of Oct. 5, 1911. Flood of June 29, 1927, reached a stage of 13.5 ft, discharge about 16,000 ft^3/s, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 22	0130	1,510	4.22	May 24	0030	1,770	4.49
May 10	1930	1,700	4.42	May 28	2400	*1,790	*4.51

Minimum daily discharge, 29 ft^3/s, Feb. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114	56	68	55	55	138	558	513	1190	217	560	43
2	107	55	75	50	55	137	488	493	1080	202	472	41
3	99	55	75	55	55	125	492	512	1010	187	286	42
4	99	55	79	60	42	116	545	565	921	172	214	44
5	101	52	78	62	29	111	553	685	880	165	180	79
6	110	47	74	66	30	108	670	838	943	152	156	58
7	111	48	83	59	37	126	843	1000	879	150	148	51
8	113	47	77	53	46	164	1060	1220	878	136	135	45
9	104	67	64	54	54	240	1120	1450	794	128	122	42
10	101	59	68	57	63	351	1060	1640	720	118	118	39
11	101	74	68	59	72	426	970	1530	716	128	144	38
12	95	58	63	55	81	456	867	1370	741	157	133	37
13	87	63	69	55	76	425	745	1160	701	124	120	53
14	83	70	71	55	71	420	741	1020	647	110	121	52
15	80	94	65	57	70	368	815	840	644	101	110	47
16	77	75	64	54	65	377	879	723	708	92	107	42
17	76	79	60	54	68	432	956	623	778	86	95	41
18	74	78	60	56	69	404	1030	592	745	81	107	43
19	72	65	65	58	73	432	1120	764	729	74	121	47
20	68	58	70	55	76	421	1250	993	657	70	93	299
21	68	48	63	55	64	355	1380	1230	576	70	84	139
22	63	54	53	55	63	382	1420	1340	466	73	76	90
23	61	69	50	62	70	461	1400	1500	394	89	72	73
24	61	78	53	60	87	526	1350	1620	363	167	60	68
25	58	64	50	60	94	592	1260	1540	336	162	55	63
26	56	69	48	55	115	582	1180	1350	304	312	53	58
27	57	54	43	58	148	496	981	1320	280	230	53	54
28	56	48	51	63	146	514	808	1430	266	180	55	51
29	56	56	46	66	---	618	673	1590	248	165	51	51
30	58	55	59	58	---	561	565	1570	236	146	47	51
31	61	---	60	61	---	525	---	1360	---	132	47	---
TOTAL	2527	1850	1972	1782	1974	11389	27779	34381	19830	4376	4195	1881
MEAN	81.5	61.7	63.6	57.5	70.5	367	926	1109	661	141	135	62.7
MAX	114	94	83	66	148	618	1420	1640	1190	312	560	299
MIN	56	47	43	50	29	108	488	493	236	70	47	37
AC-FT	5010	3670	3910	3530	3920	22590	55100	68190	39330	8680	8320	3730

CAL YR 1988 TOTAL 93477 MEAN 255 MAX 1710 MIN 43 AC-FT 185400
WTR YR 1989 TOTAL 113936 MEAN 312 MAX 1640 MIN 29 AC-FT 226000

09342500 SAN JUAN RIVER AT PAGOSA SPRINGS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: December 1988 to May 1989 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO
DEC											
07...	1030	72	180	8.4	1.0	11.5	50	15	3.1	12	0.8
MAY											
23...	1100	1410	63	8.2	7.0	9.9	22	7.0	1.2	2.9	0.3

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)
DEC											
07...	1.6	49	29	1.8	0.10	18	112	111	0.15	21.8	<0.01
MAY											
23...	1.0	25	5.0	0.50	0.10	14	--	47	0.09	247	<0.01

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)
DEC											
07...	<0.01	<0.10	0.10	0.02	0.02	0.28	--	0.30	<0.20	0.03	0.02
MAY											
23...	0.01	<0.10	<0.10	0.04	0.02	0.46	0.48	0.50	0.50	0.04	0.02

DATE	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORGANIC TOTAL (MG/L AS P)	PHOS-PHOROUS ORGANIC DIS-SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)
DEC											
07...	0.01	0.03	0.02	0.0	<1	20	<1	<1	30	270	<5
MAY											
23...	<0.01	<0.01	0.04	0.02	<1	<10	<1	2	17	1300	11

DATE	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	PICLO-RAM (TOR-DON) (AMDON) TOTAL (UG/L)	DICAMBA (MED-IBEN) (BAN-VEL D) TOTAL (UG/L)
DEC										
07...	30	<0.10	<1	20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MAY										
23...	40	<0.10	<1	20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

09343300 RIO BLANCO BELOW BLANCO DIVERSION DAM, NEAR PAGOSA SPRINGS, CO

LOCATION.--Lat 37°12'11", long 106°48'45", in NW¼ sec.11, T.34 N., R.1 E., Archuleta County, Hydrologic Unit 14080101, on left bank 250 ft downstream from Blanco Diversion Dam, 1.1 mi downstream from Leche Creek, and 12 mi southeast of Pagosa Springs.

DRAINAGE AREA.--69.1 mi².

PERIOD OF RECORD.--March 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is 7,848.81 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Bureau of Reclamation).

REMARKS.--Estimated daily discharges: Oct. 24 to Nov. 22, Nov. 28, Dec. 1-18, 21, Dec. 24 to Jan. 1, Jan. 19, Feb. 5-8, 12-14, 18, and Feb. 21-24. Records good except for estimated daily discharges, which are fair. Flows controlled by diversion dam upstream.

AVERAGE DISCHARGE.--18 years, 50.0 ft³/s; 36,300 acre-ft/yr.

COOPERATION.--Records collected by U.S. Bureau of Reclamation, computed by Colorado Division of Water Resources, and reviewed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,810 ft³/s June 8, 1985, gage height, 4.75 ft; minimum daily, 6.9 ft³/s, Dec. 29, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 585 ft³/s at 0915 Sept. 20, gage height, 4.00 ft; minimum daily, 8.0 ft³/s, Feb. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	18	21	12	25	37	138	39	29	21	24	19
2	20	16	22	12	23	36	104	40	21	21	20	17
3	21	16	22	9.2	21	31	99	43	21	21	21	16
4	20	16	22	11	12	31	109	42	20	21	21	37
5	21	16	22	13	9.0	28	143	42	20	21	21	33
6	22	16	22	17	8.0	29	190	47	21	21	20	19
7	25	16	22	16	10	39	226	56	21	21	20	21
8	25	16	22	14	16	91	244	62	21	21	21	18
9	22	22	20	15	22	182	241	44	20	21	20	17
10	21	20	20	16	23	211	222	43	20	21	20	17
11	20	20	20	16	21	151	208	39	20	21	21	17
12	19	20	20	17	18	119	187	39	20	20	21	20
13	19	20	20	16	18	100	170	39	20	21	20	27
14	19	20	20	15	18	91	184	39	20	21	21	24
15	18	22	20	16	18	87	207	39	21	20	21	20
16	18	20	18	16	18	94	216	40	21	20	21	18
17	17	20	18	16	19	93	235	41	21	20	21	18
18	17	24	20	16	20	91	258	41	21	20	21	20
19	17	22	20	15	21	100	270	41	21	20	21	21
20	16	22	19	17	19	92	291	41	21	21	21	187
21	16	22	18	18	18	86	316	41	20	21	21	45
22	16	22	16	18	20	109	314	41	20	21	20	31
23	16	23	18	17	22	127	303	40	21	22	20	28
24	16	28	16	18	26	142	289	40	21	22	20	26
25	16	24	14	18	36	158	260	40	21	21	21	23
26	16	25	16	18	47	142	227	40	21	21	20	21
27	16	20	12	18	47	120	181	40	21	20	21	19
28	16	20	10	19	40	147	97	40	21	21	21	18
29	16	21	11	18	---	164	39	40	21	20	20	17
30	18	21	12	20	---	136	39	40	21	20	20	16
31	18	---	12	25	---	132	---	40	---	20	21	---
TOTAL	577	608	565	503.2	615.0	3196	6007	1299	628	643	642	830
MEAN	18.6	20.3	18.2	16.2	22.0	103	200	41.9	20.9	20.7	20.7	27.7
MAX	25	28	22	25	47	211	316	62	29	22	24	187
MIN	16	16	10	9.2	8.0	28	39	39	20	20	20	16
AC-FT	1140	1210	1120	998	1220	6340	11910	2580	1250	1280	1270	1650

CAL YR 1988 TOTAL 10207.8 MEAN 27.9 MAX 197 MIN 5.5 AC-FT 20250
WTR YR 1989 TOTAL 16113.2 MEAN 44.1 MAX 316 MIN 8.0 AC-FT 31960

09344000 NAVAJO RIVER AT BANDED PEAK RANCH, NEAR CHROMO, CO

LOCATION.--Lat 37°05'07", long 106°41'20", in NW¼ sec.24, T.33 N., R.2 E., Archuleta County, Hydrologic Unit 14080101, on left bank at downstream side of private bridge on Banded Peak Ranch, 0.5 mi downstream from Aspen Creek, 4.0 mi downstream from East Fork, and 9 mi northeast of Chromo.

DRAINAGE AREA.--69.8 mi².

PERIOD OF RECORD.--October 1936 to current year. Monthly discharge only for some periods, published in WSP 1313.

GAGE.--Water-stage recorder. Datum of gage is 7,940.6 ft above National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to Oct. 1, 1949, at datum 3.00 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 19-23, 25, Nov. 27 to Jan. 25, Feb. 6-9, and June 30 to July 10. Records good except for estimated daily discharges, which are fair. Diversions for irrigation of about 430 acres upstream from station.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--53 years, 109 ft³/s; 79,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,480 ft³/s, June 9, 1980, gage height, 4.55 ft, from rating curve extended above 840 ft³/s, on basis of float-area measurement at gage height 4.44 ft; maximum gage height, 7.02 ft, May 13, 1941, present datum; minimum daily discharge, 8.4 ft³/s, Sept. 29, 1960, result of temporary blockage by channel alteration upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred Oct. 5, 1911.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Aug. 1	2200	*420	*2.25				

Minimum daily, 16 ft³/s, Feb. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	32	29	34	32	46	135	131	261	76	200	36
2	35	31	29	34	33	46	127	131	241	72	166	34
3	35	31	29	34	30	42	126	137	216	62	110	33
4	35	31	30	34	23	39	126	144	197	62	86	54
5	37	30	30	36	22	38	135	153	197	60	74	61
6	39	30	30	32	16	40	156	186	197	62	64	46
7	44	30	30	28	18	50	186	216	197	62	55	42
8	41	29	29	24	22	60	225	253	197	54	53	40
9	41	36	29	26	26	82	238	294	181	44	49	38
10	40	33	30	28	28	110	219	318	168	44	49	37
11	39	32	29	30	30	114	208	294	166	65	52	36
12	38	31	28	28	30	116	197	261	171	76	55	37
13	37	30	28	26	30	116	176	228	156	58	52	37
14	37	32	30	26	30	112	178	211	144	47	54	36
15	36	31	30	28	31	104	194	178	154	49	48	34
16	35	29	30	28	31	109	208	163	168	49	46	33
17	35	30	29	28	31	116	226	151	171	47	46	33
18	34	31	30	30	32	116	244	154	166	44	72	32
19	34	30	32	30	32	134	254	184	161	43	58	33
20	34	30	32	30	32	131	268	228	149	48	52	105
21	34	30	30	30	32	120	279	268	135	52	48	54
22	33	30	28	30	32	131	272	290	118	69	46	44
23	33	29	30	30	32	145	268	306	104	82	41	41
24	33	30	28	30	36	144	265	326	102	93	40	38
25	33	29	28	30	40	144	248	310	98	98	38	37
26	32	29	30	30	46	135	232	286	93	118	37	36
27	32	28	28	31	47	126	205	290	89	104	36	35
28	32	27	26	31	45	140	176	318	88	106	36	34
29	32	28	28	30	---	151	156	354	86	97	35	34
30	32	29	30	31	---	140	140	354	80	81	36	33
31	32	---	32	32	---	137	---	298	---	73	41	---
TOTAL	1099	908	911	929	869	3234	6067	7425	4651	2097	1875	1223
MEAN	35.5	30.3	29.4	30.0	31.0	104	202	240	155	67.6	60.5	40.8
MAX	44	36	32	36	47	151	279	354	261	118	200	105
MIN	32	27	26	24	16	38	126	131	80	43	35	32
AC-FT	2180	1800	1810	1840	1720	6410	12030	14730	9230	4160	3720	2430

CAL YR 1988 TOTAL 31185 MEAN 85.2 MAX 433 MIN 24 AC-FT 61860
WTR YR 1989 TOTAL 31288 MEAN 85.7 MAX 354 MIN 16 AC-FT 62060

09344400 NAVAJO RIVER BELOW OSO DIVERSION DAM, NEAR CHROMO, CO

LOCATION.--Lat 37°01'48", long 106°44'16", in NE¼ sec.9, T.32 N., R.2 E., Archuleta County, Hydrologic Unit 14080101, on left bank 600 ft downstream from Oso Diversion Dam, 5.5 mi east of Chromo, and 6 mi upstream from Little Navajo River.

DRAINAGE AREA.--100.5 mi².

PERIOD OF RECORD.--March 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is 7,647.71 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Bureau of Reclamation).

REMARKS.--Estimated daily discharges: Nov. 27, Dec. 25-30, Jan. 7 to Feb. 4, Feb. 6-8, and Feb. 11. Records good except for estimated daily discharges, which are fair. Flows controlled by diversion dam upstream.

AVERAGE DISCHARGE.--18 years, 66.0 ft³/s; 47,820 acre-ft/yr.

COOPERATION.--Records collected by U.S. Bureau of Reclamation, computed by Colorado Division of Water Resources, and reviewed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,330 ft³/s, May 24, 1984, gage height, 4.92 ft; minimum daily, 10 ft³/s, Oct. 10, 11, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 250 ft³/s at 2030 Mar. 25, gage height, 3.27 ft, maximum gage height, 3.84 ft at 0715 Dec. 30 (backwater from ice); minimum daily discharge, 18 ft³/s, Feb. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	35	32	36	36	55	179	90	74	57	56	37
2	43	35	35	36	36	57	165	89	56	57	57	30
3	35	35	35	36	32	48	105	89	56	55	57	28
4	33	34	35	37	24	44	59	89	56	56	56	30
5	40	32	35	39	23	42	61	89	56	56	57	70
6	41	33	36	37	18	44	61	89	57	56	57	42
7	49	33	36	30	20	55	55	89	57	56	57	33
8	44	33	35	26	26	70	48	89	57	48	57	31
9	41	44	33	23	35	99	48	89	56	41	56	29
10	39	38	35	30	38	143	48	90	57	42	48	29
11	38	39	34	32	36	160	48	90	57	63	48	29
12	37	36	34	30	37	159	48	91	56	71	56	29
13	37	37	35	28	37	160	48	89	56	59	50	33
14	36	39	36	28	37	150	49	88	56	44	59	34
15	36	41	36	30	37	131	48	89	57	45	50	32
16	39	35	34	30	36	139	48	90	57	48	41	29
17	39	35	34	30	37	154	49	90	57	46	41	27
18	39	37	35	32	38	156	49	91	56	41	59	28
19	38	34	36	32	40	175	49	91	56	39	55	25
20	38	32	36	32	38	163	49	91	57	40	48	96
21	37	31	35	32	36	141	49	90	57	45	50	43
22	37	31	31	32	37	153	49	91	57	53	55	42
23	37	31	35	32	39	172	49	92	57	79	54	40
24	37	35	32	32	43	184	46	91	57	102	46	39
25	37	34	30	32	49	201	40	91	57	82	43	36
26	36	35	34	32	56	196	38	91	57	84	43	35
27	36	33	30	34	58	169	39	91	57	59	42	35
28	37	31	28	34	55	184	40	92	57	56	40	35
29	37	32	30	34	---	217	39	91	57	56	39	34
30	38	31	32	34	---	197	50	92	57	57	38	34
31	37	---	34	36	---	176	---	91	---	57	40	---
TOTAL	1192	1041	1048	1003	1034	4194	1753	2795	1717	1750	1555	1094
MEAN	38.5	34.7	33.8	32.4	36.9	135	58.4	90.2	57.2	56.5	50.2	36.5
MAX	49	44	36	39	58	217	179	92	74	102	59	96
MIN	33	31	28	26	18	42	38	88	56	39	38	25
AC-FT	2360	2060	2080	1990	2050	8320	3480	5540	3410	3470	3080	2170

CAL YR 1988 TOTAL 19247 MEAN 52.6 MAX 213 MIN 26 AC-FT 38180
WTR YR 1989 TOTAL 20176 MEAN 55.3 MAX 217 MIN 18 AC-FT 40020

09345200 LITTLE NAVAJO RIVER BELOW LITTLE OSO DIVERSION DAM, NEAR CHROMO, CO

LOCATION.--Lat 37°04'32", long 106°48'38", in SW¼ sec.23, T.33 N., R.1 E., Archuleta County, Hydrologic Unit 14080101, on right bank at Little Oso Diversion Dam, 3.5 mi northeast of Chromo, and 4.0 mi upstream from confluence with Navajo River.

DRAINAGE AREA.--14.2 mi².

PERIOD OF RECORD.--June 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is 7,756.10 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.--Flows controlled by diversion dam upstream.

AVERAGE DISCHARGE.--18 years, 8.68 ft³/s; 6,290 acre-ft/yr.

COOPERATION.--Records collected and computed by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 235 ft³/s, May 30, 1979; no flow Apr. 14, 1974, and Oct. 21, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 69 ft³/s, Apr. 9; minimum daily, 1.1 ft³/s, Aug. 29-30, and Sept. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT		DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	1.9	2.4	1.7	2.0	4.1	46	21	13	2.2	13	1.2
2	2.1	1.9	2.5	1.7	2.0	4.1	43	21	12	2.1	12	1.2
3	2.1	1.7	2.5	1.6	1.9	3.8	55	21	11	2.1	6.0	1.1
4	2.0	1.7	2.5	1.6	1.7	3.3	56	22	10	2.0	3.8	1.7
5	2.2	1.7	2.6	1.9	1.7	3.0	58	23	9.0	2.0	3.2	2.9
6	2.5	1.7	2.6	1.7	1.9	3.0	61	25	8.8	2.0	2.9	1.5
7	3.2	1.7	2.6	1.7	1.9	3.8	65	26	8.2	2.0	2.6	1.4
8	2.8	1.9	2.5	1.6	1.9	6.5	68	28	8.2	1.7	2.5	1.4
9	2.9	2.5	2.4	1.6	1.9	13	69	29	8.0	1.6	2.4	1.3
10	2.6	2.4	2.4	1.6	1.9	19	67	30	7.6	1.7	2.1	1.2
11	2.4	2.6	2.2	1.6	1.9	22	65	27	7.1	2.2	2.1	1.2
12	2.4	3.0	2.2	1.6	1.9	22	63	25	6.9	2.6	2.0	1.3
13	2.2	2.9	2.2	1.5	1.7	23	59	22	6.7	1.9	2.2	1.3
14	2.2	2.9	2.4	1.5	1.7	23	59	19	6.3	1.6	2.1	1.4
15	2.2	2.5	2.4	1.5	1.7	20	60	17	5.8	1.5	1.9	1.3
16	2.1	2.0	2.2	1.5	1.7	22	60	16	5.4	1.4	1.9	1.2
17	2.1	2.8	2.2	1.5	1.7	27	49	15	5.1	1.4	1.7	1.2
18	2.1	2.5	2.2	1.5	1.9	32	28	15	4.9	1.3	1.7	1.2
19	2.0	2.4	2.4	1.5	2.0	39	28	15	4.6	1.3	1.9	1.2
20	1.9	2.2	2.4	1.6	2.0	39	31	16	4.3	1.5	3.9	7.6
21	1.9	2.2	2.2	1.6	1.9	31	35	17	4.1	1.9	2.8	2.9
22	1.9	2.1	2.2	1.6	1.9	35	33	18	3.9	2.1	2.0	1.9
23	1.9	2.2	2.4	1.6	2.0	41	30	18	3.6	4.0	1.9	1.7
24	1.9	2.5	2.4	1.7	2.4	44	30	19	3.5	4.6	1.9	1.6
25	1.9	2.4	2.4	1.7	3.0	50	28	18	3.2	6.7	1.6	1.5
26	1.9	2.5	2.4	1.7	4.1	48	27	16	3.1	8.6	1.5	1.4
27	1.9	2.4	2.2	1.7	4.9	41	25	15	2.8	5.8	1.4	1.4
28	1.9	2.4	2.2	1.7	4.3	46	25	15	2.8	6.5	1.3	1.3
29	1.9	2.4	2.2	1.7	---	54	25	16	2.6	4.8	1.1	1.3
30	1.9	2.2	2.2	1.9	---	51	22	17	2.5	3.3	1.1	1.2
31	1.9	---	2.2	2.0	---	44	---	14	---	2.6	1.4	---
TOTAL	67.1	68.2	72.8	50.9	61.5	817.6	1370	616	185.0	87.0	89.9	50.0
MEAN	2.16	2.27	2.35	1.64	2.20	26.4	45.7	19.9	6.17	2.81	2.90	1.67
MAX	3.2	3.0	2.6	2.0	4.9	54	69	30	13	8.6	13	7.6
MIN	1.9	1.7	2.2	1.5	1.7	3.0	22	14	2.5	1.3	1.1	1.1
AC-FT	133	135	144	101	122	1620	2720	1220	367	173	178	99

CAL YR 1988 TOTAL 2828.3 MEAN 7.73 MAX 51 MIN 1.7 AC-FT 5610
WTR YR 1989 TOTAL 3536.0 MEAN 9.69 MAX 69 MIN 1.1 AC-FT 7010

09346000 NAVAJO RIVER AT EDITH, CO

LOCATION.--Lat 37°00'10", long 106°54'25", in NW¼NW¼ sec.24, T.32 N., R.1 W., Archuleta County, Hydrologic Unit 14080101, on right bank 290 ft downstream from highway bridge, 0.2 mi southeast of Edith, 0.5 mi upstream from Colorado-New Mexico State line, and 1.3 mi upstream from Coyote Creek.

DRAINAGE AREA.--172 mi².

PERIOD OF RECORD.--Streamflow records, September 1912 to current year. Monthly or yearly discharge only for some periods, published in WSP 1313. Water-quality data available, November 1970 to September 1974. Sediment data available April 1973 to September 1974.

REVISED RECORDS.--WSP 1243: 1943, 1945. WSP 1633: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,033.00 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Bureau of Reclamation). Prior to Jan. 1, 1929, nonrecording gage at site 240 ft upstream, at different datum. June 2, 1935, to June 27, 1941, water-stage recorder at sites 200 and 240 ft upstream, at datum 2.0 ft, higher. June 28, 1941, to June 20, 1961, at site 50 ft downstream at present datum.

REMARKS.--Estimated daily discharges: Dec. 13 to Mar. 6. Records good except those for flows over 250 ft³/s, which are fair, and those for estimated daily discharges, which are poor. Diversions for irrigation of about 1,700 acres upstream from station. Highwater diversions upstream from station into Heron Reservoir through Azotea tunnel began in March 1971. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--58 years, (water years 1913-70), 155 ft³/s; 112,300 acre-ft/yr, prior to diversions through Azotea tunnel: 19 years (water years 1971-89), 84.7 ft³/s; 61,370 acre-ft/yr, subsequent to diversion through Azotea tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,840 ft³/s, Apr. 23, 1942, gage height, 6.55 ft, from rating curve extended above 1,100 ft³/s; minimum daily, 8.0 ft³/s, Sept. 25, 1953, Aug. 7, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 5, 1911, exceeded all other observed floods at this location.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 395 ft³/s at 2000 Mar. 19, gage height, 3.92 ft; maximum gage height, 4.73 ft, Jan. 3 (backwater from ice); minimum daily discharge, 20 ft³/s, Feb. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	47	39	34	34	80	245	107	95	65	90	33
2	53	49	43	30	34	80	224	110	69	66	87	30
3	47	49	46	34	32	75	172	112	68	65	70	30
4	38	49	43	36	26	70	121	112	67	61	68	36
5	42	48	43	38	20	65	123	108	70	61	68	74
6	49	47	46	38	22	70	129	95	67	57	67	54
7	63	49	47	36	24	77	135	95	65	55	65	39
8	57	49	47	32	28	95	132	93	65	52	65	40
9	55	63	41	34	32	149	135	95	65	39	55	38
10	52	57	43	36	38	212	129	97	71	40	49	38
11	55	63	43	34	44	248	123	100	67	55	43	37
12	54	54	40	34	43	245	120	100	62	80	55	35
13	52	55	40	32	44	266	110	100	60	65	55	35
14	51	58	42	32	44	261	108	107	61	46	56	36
15	52	61	40	32	42	214	107	110	61	41	57	31
16	52	55	38	32	40	234	107	110	60	47	46	30
17	49	54	36	32	40	279	98	105	57	47	49	28
18	48	56	38	34	42	280	74	100	55	39	64	28
19	47	54	40	34	44	314	75	100	55	35	66	30
20	47	46	40	34	46	281	75	100	61	40	57	118
21	47	44	36	34	40	229	77	105	61	43	55	75
22	47	39	32	34	38	234	75	100	57	67	55	53
23	43	39	32	36	44	256	72	100	56	78	55	52
24	46	40	32	36	50	256	75	110	52	117	49	51
25	43	43	30	36	60	273	75	98	60	108	49	46
26	39	42	28	34	70	270	67	105	60	107	48	46
27	42	40	26	34	90	239	62	98	57	82	41	43
28	47	40	30	38	85	245	65	100	56	75	46	42
29	47	39	30	38	---	276	70	102	58	67	39	40
30	47	39	34	36	---	259	70	107	55	66	37	40
31	47	---	36	36	---	235	---	107	---	65	34	---
TOTAL	1511	1468	1181	1070	1201	6367	3250	3188	1873	1931	1740	1308
MEAN	48.7	48.9	38.1	34.5	42.9	205	108	103	62.4	62.3	56.1	43.6
MAX	63	63	47	38	90	314	245	112	95	117	90	118
MIN	38	39	26	30	20	65	62	93	52	35	34	28
AC-FT	3000	2910	2340	2120	2380	12630	6450	6320	3720	3830	3450	2590

CAL YR 1988 TOTAL 25249 MEAN 69.0 MAX 281 MIN 26 AC-FT 50080
WTR YR 1989 TOTAL 26088 MEAN 71.5 MAX 314 MIN 20 AC-FT 51750

09346400 SAN JUAN RIVER NEAR CARRACAS, CO

LOCATION.--Lat 37°00'49", long 107°18'42", in SE¼SW¼ sec.17, T.32 N., R.4 W., Archuleta County, Hydrologic Unit 14080101, on right bank just upstream from flow line of Navajo Reservoir, 3 mi northwest of Carracas, 7.2 mi upstream from Piedra River, and at mile 332.8.

DRAINAGE AREA.--1,230 mi², approximately.

PERIOD OF RECORD.--Streamflow records, October 1961 to current year. Water-quality data available, July 1969 to August 1973. Sediment data available, August 1973.

GAGE.--Water-stage recorder and crest stage gage. Elevation of gage is 6,090 ft above National Geodetic Vertical Datum of 1929, from river-profile map.

REMARKS.--Estimated daily discharges: Nov. 19-21, Dec. 14-19, Dec. 22 to Mar. 4, and June 26-28. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 11,000 acres upstream from station. Highwater diversions upstream from station into Rio Grande basin through Azotea tunnel (station 08284160) began in March 1971. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--9 years (water years 1962-70), 632 ft³/s; 457,900 acre-ft/yr, prior to completion of Azotea tunnel: 19 years (water years 1971-89), 649 ft³/s; 470,200 acre-ft/yr, since completion of Azotea tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,730 ft³/s, Sept. 6, 1970, gage height, 8.34 ft, from rating curve extended above 6,000 ft³/s, on basis of slope-area measurement of peak flow; minimum daily, about 5 ft³/s, Dec. 10, 1961, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods occurred Sept. 5 or 6, 1909; Oct. 5, 1911; June 29, 1927.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 25	1100	*1,830	*4.08				

Minimum daily, 87 ft³/s, Sept. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	198	140	166	170	170	440	1210	757	1410	308	515	108
2	192	138	206	160	170	430	1120	725	1260	294	826	102
3	180	135	220	160	170	400	1070	740	1180	277	461	91
4	175	135	227	180	140	390	1060	779	1100	257	342	89
5	169	130	227	190	110	385	1060	858	1030	242	282	125
6	175	128	224	200	100	343	1140	977	1090	235	254	164
7	196	125	241	180	120	441	1260	1120	1050	217	235	128
8	206	130	257	160	140	648	1450	[illegible]	1020	210	221	114
9	196	140	208	170	170	939	1550	1540	981	196	210	104
10	182	174	189	170	200	1210	1500	1680	907	175	179	97
11	179	172	216	180	230	1300	1390	1680	890	175	175	96
12	175	206	193	170	250	1320	1320	1520	890	233	199	96
13	169	170	199	170	240	1290	1210	1350	875	234	199	102
14	166	169	200	170	230	1340	1180	1200	821	204	186	118
15	163	189	200	170	220	1170	1230	1080	804	179	191	116
16	163	210	190	170	210	1150	1270	943	816	166	189	102
17	160	164	190	170	210	1280	1320	871	879	157	179	93
18	157	175	190	170	220	1290	1370	821	880	145	175	89
19	151	160	200	170	230	1320	1450	889	836	130	230	87
20	151	150	217	170	240	1330	1540	1060	750	120	207	391
21	148	130	186	170	210	1100	1700	1320	732	122	189	415
22	145	141	160	170	200	1080	1760	1460	642	131	175	209
23	145	150	150	180	240	1180	1720	1560	534	205	169	170
24	143	172	160	190	280	1210	1710	1690	483	234	157	151
25	138	192	160	190	310	1270	1610	1740	450	338	140	143
26	140	164	150	170	360	1310	1530	1560	420	420	133	130
27	133	163	140	180	460	1180	1340	1510	390	428	130	128
28	132	133	150	190	460	1160	1170	1530	360	310	128	124
29	132	135	140	200	---	1270	935	1690	347	285	125	120
30	135	148	170	180	---	1260	822	1730	326	254	120	118
31	137	---	180	180	---	1140	---	1580	---	242	119	---
TOTAL	5031	4668	5906	5450	6290	31576	39997	39260	24153	7123	7040	4119
MEAN	162	156	191	176	225	1019	1333	1266	805	230	227	137
MAX	206	210	257	200	460	1340	1760	1740	1410	428	826	415
MIN	132	125	140	160	100	343	822	725	326	120	119	87
AC-FT	9980	9260	11710	10810	12480	62630	79330	77870	47910	14130	13960	8170

CAL YR 1988 TOTAL 158826 MEAN 434 MAX 2160 MIN 125 AC-FT 315000
WTR YR 1989 TOTAL 180613 MEAN 495 MAX 1760 MIN 87 AC-FT 358200

09349800 PIEDRA RIVER NEAR ARBOLES, CO

LOCATION.--Lat 37°05'18", long 107°23'50", in NE¼SW¼ sec.21, T.33 N., R.5 W., Archuleta County, Hydrologic Unit 14080102, on left bank 3 mi downstream from Ignacio Creek, 4.6 mi northeast of Arboles Post Office, and 2.5 mi upstream from Navajo Reservoir.

DRAINAGE AREA.--629 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Streamflow records, August 1962 to current year. Gage operated 1895-99 and 1910-27 at site 7.5 mi downstream at altitude 6,000 ft. Low-flow records probably not equivalent. Water-quality data available, November 1972 to August 1973, December 1988 to May 1989.

GAGE.--Water-stage recorder. Datum of gage is 6,147.52 ft above National Geodetic Vertical Datum of 1929, Colorado State Highway Department benchmark.

REMARKS.--Estimated daily discharges: Nov. 20-22, Dec. 12-14, 17, 18, Dec. 21 to Jan. 18, Jan. 20 to Feb. 18, and June 27, 28. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 2,800 acres upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--27 years, 411 ft³/s; 297,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,370 ft³/s, Sept. 6, 1970, gage height, 6.38 ft, recorded, 7.55 ft, from floodmarks, from rating curve extended above 4,400 ft³/s, on basis of slope-area measurement of peak flow; minimum discharge, 11 ft³/s, Dec. 9, 1963, Oct. 1, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods occurred Sept. 5 or 6, 1909, and Oct. 5, 1911.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 26	0400	----	a*4.50	Apr. 9	[illegible]00	*1,620	3.14

Minimum daily discharge, 36 ft³/s, Feb. 6.
a Backwater from ice.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	185	98	99	70	70	195	1030	543	862	149	455	56
2	174	99	105	65	70	198	934	501	798	142	494	55
3	162	97	105	70	70	216	908	494	756	125	333	52
4	152	95	97	75	60	189	978	547	693	108	232	50
5	151	95	97	80	38	167	941	636	651	99	196	63
6	167	87	95	80	36	164	1020	718	677	93	160	88
7	188	87	93	70	44	191	1150	857	645	91	145	71
8	209	89	99	65	50	249	1380	985	644	87	130	62
9	188	95	93	70	65	343	1500	1180	638	81	123	62
10	178	97	87	70	75	473	1470	1230	579	79	122	61
11	171	103	89	75	90	667	1310	1220	578	81	150	56
12	157	112	80	75	100	788	1250	1050	584	89	158	49
13	151	99	85	70	95	811	1050	887	566	103	160	60
14	145	101	85	70	90	849	966	771	525	91	138	67
15	128	117	87	70	85	736	1000	673	512	79	125	65
16	125	115	87	70	85	707	1050	581	518	73	118	61
17	123	99	75	70	85	880	1130	560	559	69	105	59
18	118	107	75	50	90	833	1180	531	548	62	101	53
19	115	101	85	41	91	985	1280	542	542	56	120	57
20	113	80	85	55	93	1160	1330	624	501	47	113	346
21	108	70	80	60	93	882	1420	807	454	53	99	309
22	105	65	70	70	89	868	1430	937	386	71	93	204
23	103	81	65	75	92	923	1360	1080	326	79	87	161
24	103	91	65	75	110	1040	1320	1140	302	93	77	139
25	101	97	65	75	135	1130	1200	1130	279	124	69	123
26	97	95	60	70	170	1160	1090	1000	262	156	64	101
27	95	85	55	70	201	952	949	957	240	167	62	97
28	93	75	60	80	199	964	793	995	210	214	65	90
29	93	87	60	80	---	1120	687	1130	195	174	65	81
30	93	91	70	75	---	1080	592	1080	174	184	61	77
31	99	---	75	75	---	974	---	959	---	167	58	---
TOTAL	4190	2810	2528	2166	2571	21894	33698	26345	15204	3286	4478	2875
MEAN	135	93.7	81.5	69.9	91.8	706	1123	850	507	106	144	95.8
MAX	209	117	105	80	201	1160	1500	1230	862	214	494	346
MIN	93	65	55	41	36	164	592	494	174	47	58	49
AC-FT	8310	5570	5010	4300	5100	43430	66840	52260	30160	6520	8880	5700

CAL YR 1988 TOTAL 109233 MEAN 298 MAX 1360 MIN 55 AC-FT 216700
WTR YR 1989 TOTAL 122045 MEAN 334 MAX 1500 MIN 36 AC-FT 242100

09349800 PIEDRA RIVER NEAR ARBOLES, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: November 1972 to August 1973, December 1988 to May 1989 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO
DEC											
07...	1215	83	438	8.3	2.0	11.2	180	57	8.2	21	0.7
MAY											
16...	1245	551	167	8.6	10.0	9.7	78	25	3.8	6.7	0.3

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)
DEC											
07...	2.5	109	100	3.5	0.20	15	291	273	0.40	65.2	<0.01
MAY											
16...	1.4	61	27	0.80	0.10	13	120	114	0.16	179	<0.01

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)
DEC											
07...	<0.01	<0.10	<0.10	0.02	0.02	0.38	0.18	0.40	0.20	0.01	<0.01
MAY											
16...	<0.01	<0.10	<0.10	0.01	0.02	0.19	--	0.20	<0.20	0.03	0.02

DATE	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORGANIC TOTAL (MG/L AS P)	PHOS-PHOROUS ORGANIC DIS-SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)
DEC											
07...	<0.01	0.02	0.01	--	2	30	<1	<1	11	200	<5
MAY											
16...	<0.01	<0.01	0.03	0.02	<1	20	<1	2	13	560	6

DATE	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	PICLO-RAM (TOR-DON) (AMDON) TOTAL (UG/L)	DICAMBA (MED-IBEN) (BAN-VEL D) TOTAL (UG/L)
DEC										
07...	30	<0.10	<1	20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MAY										
16...	30	<0.10	<1	<10	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

09352900 VALLECITO CREEK NEAR BAYFIELD, CO
(Hydrologic bench-mark station)

LOCATION.--Lat 37°28'39", long 107°32'35", in NE¼NW¼ sec.16, T.37 N., R.6 W., La Plata County, Hydrologic Unit 14080101, on right bank 60 ft upstream from Fall Creek, 0.8 mi downstream from Bear Creek, 6.7 mi north of Vallecito Dam, and 18 mi north of Bayfield.

DRAINAGE AREA.--72.1 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1962 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 7,906.08 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 19-23, Nov. 25 to Dec. 1, Dec. 6, Dec. 9 to Jan. 3, Jan. 5-15, Jan. 18 to Feb. 11, Feb. 15, 16, 21, 22, and Mar. 4, 5. Records good except for estimated daily discharges, which are poor. No diversion upstream from station.

AVERAGE DISCHARGE.--27 years, 148 ft^3/s; 107,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,050 ft^3/s, Sept. 6, 1970, gage height, 5.51 ft, from water-stage recorder, 6.76 ft, from floodmarks, from rating curve extended above 1,400 ft^3/s, on basis of slope-area measurement of peak flow; minimum daily, 6.7 ft^3/s, Dec. 28, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods occurred in October 1911 and June 1927.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug. [illegible]	[illegible]	*[illegible]	*[illegible]				

Minimum daily, [illegible] ft^3/s, Feb. [illegible].

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	---	[illegible]	[illegible]	---	[illegible]	---	[illegible]	---	[illegible]	[illegible]	---
TOTAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MEAN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAX	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AC-FT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CAL YR [illegible] TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN [illegible] AC-FT [illegible]
WTR YR [illegible] TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN [illegible] AC-FT [illegible]

09352900 VALLECITO CREEK NEAR BAYFIELD, CO--Continued
(Hydrologic Bench-Mark Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1963 to September 1968; October 1969 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: November 1962 to September 1982.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: (Water years 1963-82) Maximum, 20.0°C July 10, 1974; minimum, 0.0°C on many days during winter months each year

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
NOV											
08...	1215	33.0	81	8.3	4.0	0.8	10	<1	K3	38	11
FEB											
22...	1300	24.0	65	8.7	1.0	0.7	11	<1	>100	40	12
JUN											
21...	1215	287	40	8.4	7.0	0.5	9.3	<1	K13	18	5.2
SEP											
19...	1000	40.0	67	8.7	9.0	0.7	8.9	K2	45	30	8.9

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE DIS-SOLVED FIELD (MG/L AS HCO3)	ALKA-LINITY TOTAL FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
NOV											
08...	2.5	1.2	0.1	0.7	38	31	9.6	0.4	0.2	4.0	42
FEB											
22...	2.4	1.3	0.1	0.7	36	29	8.8	0.3	0.1	4.4	42
JUN											
21...	1.1	0.6	0.1	0.3	18	15	[illegible]	0.1	0.1	2.5	39
SEP											
19...	1.8	1.0	0.1	0.8	[illegible]	[illegible]	8.0	0.6	0.1	3.6	53

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)
NOV											
08...	49	0.06	3.74	0.11	0.01	0.12	0.02	0.01	0.58	0.6	[illegible]
FEB											
22...	50	0.06	2.72	--	<0.01	0.18	0.02	0.01	0.58	0.6	0.01
JUN											
21...	23	0.05	30.2	--	<0.01	<0.10	0.01	<0.01	0.19	0.2	0.01
SEP											
19...	39	0.07	5.72	--	<0.01	<0.10	0.02	0.02	0.28	0.3	0.03

DATE	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
NOV											
08...	0.01	<0.01	20	<1	16	<0.5	<1	<1	<3	3	[illegible]
FEB											
22...	<0.01	<0.01	30	<1	17	<0.5	<1	<1	<3	[illegible]	[illegible]
JUN											
21...	<0.01	<0.01	40	<1	8	<0.5	<1	1	<3	1	15
SEP											
19...	0.02	<0.01	30	<1	13	<0.5	<1	<1	<3	3	7

K Based on non-ideal colony count

09352900 VALLECITO CREEK NEAR BAYFIELD, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV											
08...	<5	<4	4	<0.1	<10	5	<1	<1.0	32	<6	8
FEB											
22...	<5	<4	2	<0.1	<10	<1	<1	1.0	36	<6	5
JUN											
21...	1	<4	11	<0.1	<10	3	<1	<1.0	19	<6	11
SEP											
19...	<1	<4	3	<0.1	<10	1	<1	<1.0	29	<6	--

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS-SOLVED (UG/L AS U)
FEB									
22...	1300	0.8	0.5	0.8	<0.4	0.7	<0.4	0.05	0.3
JUN									
21...	1215	<0.4	<0.4	2.7	0.4	2.2	<0.4	0.07	0.28

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
08...	1215	33.0	1	0.06	--
FEB					
22...	1300	24.0	9	0.58	40
JUN					
21...	1215	287	3	2.3	69
SEP					
19...	1000	40.0	2	0.22	58

09353000 VALLECITO RESERVOIR NEAR BAYFIELD, CO

LOCATION.--Lat 37°23'00", long 107°34'30", in SW¼SW¼ sec.18, T.36 N., R.6 W., La Plata County, Hydrologic Unit 14080101, in gatehouse above outlet gates at Vallecito Dam on Los Pinos (Pine) River, 300 ft left of spillway, 0.4 mi upstream from Jack Creek, and 11 mi northeast of Bayfield.

PERIOD OF RECORD.--April 1941 to current year.

REVISED RECORDS.--WSP 959: 1941. WSP 1513: 1956.

GAGE.--Water-stage recorder. Elevation of gage is 7,580 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above National Geodetic Vertical Datum.

REMARKS.--Reservoir is formed by earth and rockfill dam; dam completed in March 1941. Capacity of reservoir, 125,640 acre-ft between elevations 7,580 ft, sill of outlet gate, and 7,665 ft, top of spillway gates. Dead storage, 3,395 acre-ft. Figures given are usable contents. Reservoir is used to store water for irrigation in Los Pinos (Pine) River basin.

COOPERATION.--Records provided by Pine River Irrigation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 128,200 acre-ft, July 27, 1957, elevation, 7,665.72 ft; minimum, 1,520 acre-ft, Oct. 24-25, 1944, elevation, 7,584.10 ft. No usable storage prior to April 1941.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 113,680 acre-ft, June 8, elevation, 7,660.53 ft; minimum, 40,940 acre-ft, Sept. 18, elevation, 7,627.69 ft.

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 0900, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	7,647.7[illegible]	81,840	-
Oct. 31	7,644.77	74,940	-6,900
Nov. 30	7,645.24	76,010	+1,070
Dec. 31	7,645.55	76,720	+710
CAL YR 1988	-	-	+22,550
Jan. 31	7,645.45	76,490	-230
Feb. 28	7,645.72	77,110	+620
Mar. 31	7,646.26	78,350	+1,240
Apr. 30	7,654.08	97,140	+18,790
May 31	7,659.84	111,860	+14,720
June 30	7,657.47	105,720	-6,140
July 31	7,646.60	79,130	-26,590
Aug. 31	7,636.05	56,320	-22,810
Sept. 30	7,628.02	41,500	-14,820
WTR YR 1989	-	-	-40,340

09354000 LOS PINOS RIVER AT IGNACIO, CO

WATER-QUALITY RECORDS

LOCATION.-- Latitude 37°07'45", longitude 107°37'50", in SW¼SE¼ sec.5, T.33 N, R.7 W, La Plata County. Site is at approximate location of former surface-water station and 0.75 mi upstream from Ignacio, and 2 mi upstream from Rock Creek.

DRAINAGE AREA.-- 448 mi²

PERIOD OF RECORD.--Chemical analyses: December 1988 to June 1989 (discontinued).

REMARKS.-- Natural flow is regulated by Vallecito Reservoir, capacity 125,640 acre-ft. Diversion for irrigation of about 25,000 acres upstream of station.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
DEC 06...	1400	132	168	8.6	4.0	11.2	K2	K9	76	24	3.9	7.7
FEB 16...	1210	103	222	8.0	2.0	11.4	--	--	--	--	--	--
JUN 19...	1340	93	224	8.7	24.0	7.9	420	480	91	29	4.4	8.3

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)
DEC 06...	0.4	[illegible]	[illegible]	11	[illegible]	[illegible]	[illegible]	110	102	0.15	39.2	<0.01
FEB 16...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 19...	0.4	1.5	99	[illegible]	0.90	0.20	7.9	131	121	0.18	32.9	<0.01

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)
DEC 06...	<0.01	0.20	<0.10	0.01	0.02	0.19	--	0.20	<0.20	0.40	0.02
FEB 16...	--	--	--	--	--	--	--	--	--	--	--
JUN 19...	<0.01	<0.10	<0.05	0.02	0.04	0.98	0.46	1.0	0.50	--	0.05

DATE	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORGANIC TOTAL (MG/L AS P)	PHOS-PHOROUS ORGANIC DIS-SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
DEC 06...	<0.01	<0.01	0.01	0.02	--	<1	<10	<1	<1	14	400
FEB 16...	--	--	--	--	--	--	--	--	--	--	--
JUN 19...	0.04	0.03	0.01	0.02	0.02	<1	<10	<1	<1	5	2500

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	PICLO-RAM (TOR-DON) (AMDON) TOTAL (UG/L)	DICAMBA (MED-IBEN) (BAN-VEL D) TOTAL (UG/L)
DEC 06...	<5	50	--	<1	20	--	--	--	--	--	--
FEB 16...	--	--	--	--	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
JUN 19...	4	120	<0.10	<1	30	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

K Based on non-ideal colony count

09354500 LOS PINOS RIVER AT LA BOCA, CO

LOCATION.--Lat 37°00'34", long 107°35'56", in NE¼NW¼ sec.22, T.32 N., R.7 W., La Plata County, Hydrologic Unit 14080101, on downstream end of right abutment of the Denver & Rio Grande Western Railroad Co. bridge, at southeast edge of La Boca, 0.1 mi upstream from Spring Creek, and 2 mi upstream from maximum elevation of Navajo Reservoir.

DRAINAGE AREA.--510 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Streamflow records, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1733. Water-quality data available, July 1969 to August 1973.

GAGE.--Water-stage recorder. Datum of gage is 6,143.59 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 22 to Feb. 16 and May 4 to June 2. Records good except for estimated daily discharges, which are poor. Flow regulated by Vallecito Reservoir (station 09353500) 28 mi upstream since April 1941. Diversions for irrigation of about 33,900 acres upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--39 years, 239 ft³/s; 173,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,490 ft³/s, July 27, 1957, gage height, 8.95 ft, from rating curve extended above 5,100 ft³/s; minimum daily, 6.1 ft³/s, May 1, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood on Oct. 5, 1911 has not yet been exceeded.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 330 ft³/s at [illegible] Aug. 1, gage height, [illegible] ft, maximum gage height, 6.33 ft at 1700 Feb. 7 (backwater from ice); minimum daily discharge, [illegible] ft³/s, Nov. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	179	180	161	489	[illegible]
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	158	[illegible]	161
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5	130	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	147	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	182	[illegible]
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	164	[illegible]
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	144	[illegible]	[illegible]
13	154	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	164	153	164	[illegible]
14	167	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15	175	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	141	[illegible]	[illegible]
16	148	154	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	167	[illegible]	[illegible]	[illegible]
18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	141	[illegible]	[illegible]
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	401	[illegible]	161	[illegible]	[illegible]	[illegible]
20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31	[illegible]	---	[illegible]	[illegible]	---	[illegible]	---	[illegible]	---	[illegible]	[illegible]	---
TOTAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MEAN	[illegible]	[illegible]	[illegible]	117	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAX	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	179	[illegible]	[illegible]	[illegible]	[illegible]
MIN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AC-FT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CAL YR 1988 TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN [illegible] AC-FT [illegible]
WTR YR 1989 TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN [illegible] AC-FT [illegible]

09354500 LOS PINOS RIVER AT LA BOCA, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: July 1969 to May 1974, January 1988 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
DEC 06...	1530	164	161	8.7	4.0	11	K7	K11	76	24
JUN 20...	1100	161	271	8.6	18.0	7.9	400	400	100	32

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
DEC 06...	3.9	8.8	0.5	1.1	80	12	1.4	0.2	3.4	105
JUN 20...	5.6	14	0.6	2.4	119	14	1.9	0.3	9.6	155

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
DEC 06...	103	0.14	46.5	<0.01	<0.01	<0.10	<0.10	<0.01	0.01	--
JUN 20...	151	0.21	67.4	0.01	<0.01	<0.10	<0.10	0.03	0.03	0.67

DATE	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORGANIC TOTAL (MG/L AS P)	PHOS-PHOROUS ORGANIC DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC 06...	--	0.3	<0.2	0.03	0.01	0.01	0.02	0.02	0.0	--
JUN 20...	0.97	0.7	1.0	0.08	0.06	0.05	0.04	0.03	0.02	9.0

DATE	TIME	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G))	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)
DEC 06...	1530	250	<1	4	<10	1	<10	8	4	3
JUN 20...	1100	2900	<1	--	10	<1	--	<1	--	2

DATE	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)
DEC 06...	<50	37	8	470	5900	<5	10	60	400	<0.10
JUN 20...	--	6	--	2200	--	4	--	140	--	<0.10

K Based on non-ideal colony count

09354500 LOS PINOS RIVER AT LA BOCA, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)
DEC							
06...	0.02	5	11	<1	<1	30	40
JUN							
20...	--	<1	7	<1	--	20	--

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)
DEC											
06...	1530	<1	<1.0	<0.1	1.0	0.3	<0.1	<0.1	<0.1	<0.1	<0.1
JUN											
20...	1100	--	--	--	--	--	--	--	--	--	--

DATE	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)
DEC										
06...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
JUN										
20...	--	--	--	--	--	--	--	--	--	--

DATE	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	PICLORAM (TORDON) (AMDON) TOTAL (UG/L)	DICAMBA (MEDIBEN) (BANVEL D) TOTAL (UG/L)
DEC										
06...	<0.1	<1.00	<10	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
JUN										
20...	--	--	--	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

09355000 SPRING CREEK AT LA BOCA, CO

LOCATION.--Lat 37°00'40", long 107°35'47", in SE¼SW¼ sec.15, T.32 N., R.7 W., La Plata County, Hydrologic Unit 14080101, on right bank in an excavated channel, 0.2 mi upstream from mouth, and 0.2 mi east of La Boca.

DRAINAGE AREA.--58 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Streamflow records, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1733. Water-quality data available, May 1974, January 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,160 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-3, Nov. 20 to Mar.2, Aug. 14, Sept. 17-19 and Sept. 21-27. Records good except those for flows above 125 ft³/s, which are fair, and those for estimated daily discharges, which are poor. Part of flow is return waste from irrigation. Nearly all irrigation in this basin is water diverted from Los Pinos River which causes a considerable change in the annual pattern and natural flow.

AVERAGE DISCHARGE.--39 years, 32.1 ft³/s; 23,260 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,980 ft³/s, Sept. 6, 1970, gage height, 4.62 ft, from rating curve extended above 160 ft³/s, on basis of field estimate of peak flow; maximum gage height, 5.98 ft, Mar. 9, 1960 (backwater from ice); minimum daily discharge, 0.6 ft³/s, Nov. 27, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 866 ft³/s at 1900 July 29, gage height, 3.34 ft; minimum daily, 2.2 ft³/s, Feb. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	5.2	4.6	4.0	4.0	16	5.6	50	60	60	253	67
2	46	5.2	5.0	3.5	4.0	20	5.6	52	56	60	159	71
3	[illegible]	5.2	5.5	4.0	4.0	29	5.2	50	58	60	71	67
4	[illegible]	[illegible]	[illegible]	[illegible]	3.2	29	4.8	42	60	60	66	71
5	[illegible]	[illegible]	[illegible]	[illegible]	2.2	20	4.4	52	60	60	64	72
6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	33	[illegible]	50	[illegible]	60	62	[illegible]
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	52	60	60	62	[illegible]
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	52	[illegible]	60	62	[illegible]
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	27	[illegible]	[illegible]	64	60	65	[illegible]
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	23	[illegible]	59	[illegible]	[illegible]	[illegible]	62
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	59	[illegible]	62	67	[illegible]
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	63	66	[illegible]
13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.9	60	[illegible]	57	66	72
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.7	62	64	57	60	67
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	64	62	61	67	67
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	22	64	62	60	72	65
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	62	59	[illegible]	[illegible]
18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	62	55	82	[illegible]
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	34	[illegible]	[illegible]	57	69	[illegible]
20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	24	62	59	60	78	[illegible]
21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	17	64	[illegible]	[illegible]	72	[illegible]
22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	16	62	64	60	67	[illegible]
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	19	[illegible]	[illegible]	[illegible]	66	[illegible]
24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	60	74	64	[illegible]
25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	17	[illegible]	64	74	64	[illegible]
26	[illegible]	[illegible]	[illegible]	[illegible]	7.5	[illegible]	24	62	64	[illegible]	67	7.0
27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.4	33	62	[illegible]	97	57	[illegible]
28	[illegible]	[illegible]	[illegible]	[illegible]	12	6.9	[illegible]	60	[illegible]	[illegible]	66	4.9
29	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	48	60	[illegible]	[illegible]	[illegible]	[illegible]
30	[illegible]	[illegible]	[illegible]	[illegible]	---	6.1	50	60	57	[illegible]	[illegible]	[illegible]
31	[illegible]	---	[illegible]	[illegible]	---	[illegible]	---	59	---	97	[illegible]	---
TOTAL	[illegible]	[illegible]	[illegible]	129.5	[illegible]	[illegible]	460.5	1806	1846	[illegible]	[illegible]	[illegible]
MEAN	[illegible]	[illegible]	[illegible]	4.17	[illegible]	15.9	15.3	58.3	61.5	[illegible]	[illegible]	[illegible]
MAX	[illegible]	7.3	5.5	4.6	10	46	50	65	[illegible]	[illegible]	253	[illegible]
MIN	[illegible]	[illegible]	[illegible]	3.6	2.2	5.7	3.7	42	56	55	[illegible]	[illegible]
AC-FT	[illegible]	[illegible]	[illegible]	257	282	979	913	3580	3660	[illegible]	4660	[illegible]

CAL YR 1988 TOTAL [illegible] MEAN [illegible] MAX 184 MIN 1.2 AC-FT 23000
WTR YR 1989 TOTAL 12146.6 MEAN 33.3 MAX 253 MIN 2.2 AC-FT [illegible]

09355000 SPRING CREEK AT LA BOCA, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: January 1988 to current year.

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO
DEC											
07...	1545	6.5	1050	8.5	0.5	12	260	73	20	140	4
JUN											
20...	1230	66	345	8.5	18.0	7.9	120	35	7.2	27	1

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)
DEC										
07...	1.8	319	200	14	0.4	5.7	647	647	0.88	11.4
JUN										
20...	3.3	139	32	3.0	0.1	11	210	202	0.29	37.4

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
DEC										
07...	0.20	0.19	0.01	0.29	0.3	0.5	[illegible]	[illegible]	[illegible]	3.2
JUN										
20...	<0.10	<0.10	0.03	0.77	0.8	--	0.10	0.03	[illegible]	13

DATE	TIME	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS) (01003)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD) (01028)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G) (01029)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO) (01037)
DEC										
07...	1545	970	<1	9	[illegible]	<1	[illegible]	<1	[illegible]	[illegible]
JUN										
20...	1230	14000	[illegible]	--	[illegible]	<1	--	[illegible]	--	[illegible]

DATE	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO) (01038)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU) (01043)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE) (01170)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB) (01052)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)
DEC									
07...	<50	6	7	1100	12	[illegible]	[illegible]	[illegible]	[illegible]
JUN									
20...	--	11	--	12500	98	--	[illegible]	--	[illegible]

DATE	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G) (01053)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG) (71921)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO) (01062)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SELE-NIUM, TOTAL IN BOT-TOM MA-TERIAL (UG/G) (01148)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN) (01093)
DEC									
07...	630	<0.1	0.02	3	7	3	<1	[illegible]	[illegible]
JUN									
20...	--	<0.1	--	<1	12	1	--	[illegible]	--

09361500 ANIMAS RIVER AT DURANGO, CO

LOCATION.--Lat 37°16'45", long 107°52'47", in SW¼SW¼ sec.20, T.35 N., R.9 W., La Plata County, Hydrologic Unit 14080104, on left bank at abandoned power plant at Durango, 0.8 mi upstream from Lightner Creek.

DRAINAGE AREA.--692 mi².

PERIOD OF RECORD.--June to December 1895, April 1896 to December 1898, April 1899 to December 1900, March to May 1901, April to November 1902, March to April 1903 (gage heights only, erroneously stated as discredited in WSP 1563), May to October 1903, July 1904 to December 1905, January to December 1910 (gage heights only), January to September 1911, January 1912 to current year. Monthly or yearly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 764: Drainage area. WSP 929: 1927(M). WSP 1243: 1911, 1918(M). WSP 1563: 1911-25 (monthly figures only).

GAGE.--Water-stage recorder. Datum of gage is 6,501.57 ft above National Geodetic Vertical Datum of 1929. See WSP 1713 or 1733 for history of changes prior to Mar. 2, 1921.

REMARKS.--Estimated daily discharges: Dec. 20-24, Dec. 26 to Jan. 3, Jan. 5-18, and Feb. 6-14. Records good except for estimated daily discharges, which are fair. Diversions for irrigation of about 4,000 acres upstream from station. Natural regulation by many lakes and regulation for power upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--84 years (water years 1897-1900, 1905, 1911-89), 847 ft³/s; 613,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft³/s, Oct. 5, 1911, gage height, 11 ft, present site and datum, from rating curve extended above 13,000 ft³/s; minimum daily, 94 ft³/s, Mar. 2, 1913.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1885, that of Oct. 5, 1911.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)
May 24	0800	*2,780	*4.75

Minimum daily, 170 ft³/s, Dec. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	426	228	257	210	225	396	703	864	1830	762	1420	228
2	400	238	275	210	233	391	675	837	1750	735	1300	213
3	382	232	271	210	254	408	666	787	1620	703	966	209
4	369	240	252	228	247	313	716	853	1470	689	769	203
5	358	233	209	220	221	274	732	953	1310	682	638	210
6	382	218	227	230	200	272	789	1120	1470	663	553	223
7	423	213	264	210	200	343	926	1450	1410	613	491	215
8	400	216	267	200	190	410	1140	1770	1460	574	451	207
9	372	220	262	200	200	488	1370	2290	1390	538	455	200
10	373	222	218	200	200	648	1430	2300	1320	504	445	202
11	366	240	223	210	200	738	1380	2240	1210	538	434	196
12	348	244	208	220	200	730	1390	1890	1290	572	420	198
13	333	231	204	200	200	701	1230	1570	1240	610	429	204
14	327	242	197	200	200	764	1110	1370	1200	555	375	200
15	323	257	255	200	220	720	1100	1240	1240	505	396	195
16	313	235	269	200	227	672	1210	1120	1510	463	386	194
17	304	245	239	200	225	681	1370	1010	1660	429	387	195
18	292	238	232	200	250	615	1480	956	1650	404	389	193
19	286	225	205	205	270	598	1640	1260	1640	364	488	196
20	278	212	200	231	254	607	1720	1640	1440	368	412	261
21	271	248	200	190	240	613	1900	2110	1330	356	408	380
22	264	206	200	192	241	600	2000	2310	1040	355	436	326
23	263	208	190	185	258	618	1850	2490	880	379	383	253
24	256	232	180	210	262	666	1830	2550	846	458	350	251
25	262	245	207	232	274	695	1730	2350	867	559	342	233
26	244	262	180	229	278	751	1640	2040	850	569	296	216
27	239	258	170	209	313	739	1400	2030	861	653	277	209
28	238	203	180	221	381	730	1220	2310	874	698	273	214
29	244	235	180	222	---	762	1050	2520	821	734	221	202
30	235	247	180	210	---	776	983	2440	802	734	314	205
31	231	---	180	220	---	728	---	2050	---	642	248	---
TOTAL	9802	6938	6781	6504	6663	18437	38380	52720	38281	17413	15252	6635
MEAN	316	231	219	210	238	595	1279	1701	1276	562	492	221
MAX	426	262	275	232	381	776	2000	2550	1830	762	1420	380
MIN	231	203	170	185	190	272	666	787	802	355	248	193
AC-FT	19440	13760	13450	12900	13220	36570	76130	104600	75930	34540	30250	13160

CAL YR 1988 TOTAL 232490 MEAN 635 MAX 3180 MIN 170 AC-FT 461100
WTR YR 1989 TOTAL 223806 MEAN 613 MAX 2550 MIN 170 AC-FT 443900

09363500 ANIMAS RIVER NEAR CEDAR HILL, NM

LOCATION.--Lat 37°02'17", long 107°52'25", in sec.7, T.32 N., R.9 W., La Plata County, Colorado, Hydrologic Unit 14080104, on right bank 0.8 mi downstream from Florida River, 2.5 mi upstream from Colorado-New Mexico State line, 8.5 mi north of Cedar Hill, and at mile 32.9.

DRAINAGE AREA.--1,090 mi², approximately.

PERIOD OF RECORD.--October 1933 to current year. Monthly discharge only for October and November 1933, published in WSP 1313.

REVISED RECORDS.--WSP 1563: 1940 and 1946 (monthly figures only).

GAGE.--Water-stage recorder. Elevation of gage is 5,960 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 14, 1937, at datum between 1.52 ft, and 1.36 ft, higher. Sept. 15, 1937, to Sept. 30, 1946, at datum 1.36 ft, higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 20,000 acres upstream from station. During water years 1944-49, Twin Rocks Canal diverted upstream from station for irrigation downstream. Slight regulation by Lemon Dam about 30 mi upstream on Florida River since November 1963 (capacity, 40,100 acre-ft). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--56 years, 921 ft³/s, 667,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,100 ft³/s, June 19, 1949, gage height, 11.45 ft; minimum, 63 ft³/s, Jan. 21, 1935.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred in October 1911 at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage Height (ft)
May 24	1015	*2,750	*6.39				

Minimum daily, 214 ft³/s, Sept. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	559	314	298	e350	e264	563	1160	945	1720	768	1270	335
2	527	322	326	e345	278	549	1000	895	1660	749	1430	313
3	502	314	325	e340	285	567	912	843	1550	716	1050	303
4	490	320	313	e350	316	475	939	875	1430	712	861	300
5	491	315	268	e360	292	368	948	967	1300	722	719	297
6	514	288	268	e355	e285	348	959	1090	1370	685	621	322
7	569	281	319	e340	e250	428	1080	1320	1370	644	547	307
8	555	271	327	e290	e295	580	1270	1590	1370	592	506	292
9	543	275	312	e270	e390	749	1470	2020	1340	566	502	264
10	531	280	283	e300	e370	911	1510	2090	1280	519	496	249
11	531	336	277	e320	e323	1030	1480	2050	1210	549	488	236
12	512	347	264	e370	332	1010	1450	1790	1230	556	464	237
13	495	317	264	e390	324	993	1350	1530	1240	631	487	252
14	582	314	249	e350	304	1020	1230	1330	1170	573	424	257
15	549	370	286	e330	249	976	1190	1240	1200	532	432	234
16	539	345	301	e350	268	908	1270	1150	1390	494	430	232
17	523	322	306	e340	268	907	1390	1070	1530	462	423	232
18	512	343	276	e335	281	867	1490	987	1540	433	419	219
19	499	323	255	e330	331	817	1560	1190	1530	399	515	214
20	496	330	285	e325	338	837	1640	1470	1400	401	472	311
21	477	322	282	e310	295	828	1860	1880	1300	387	452	422
22	456	297	305	e300	290	808	2080	2070	1110	373	483	398
23	450	267	291	e295	310	826	2020	2230	935	400	436	328
24	442	299	e322	e290	367	872	1940	2320	884	491	412	318
25	447	348	e315	e295	389	911	1840	2180	896	600	398	303
26	391	356	e320	e315	437	1020	1750	1920	878	646	362	270
27	369	353	e295	e320	530	1080	1520	1870	859	768	345	254
28	356	302	e290	e315	576	1070	1270	2090	857	776	347	255
29	349	262	e300	e305	---	1080	1140	2270	828	792	384	240
30	320	318	e305	e300	---	1170	1060	2230	808	824	410	241
31	314	---	e340	e308	---	1180	---	1930	---	735	374	---
TOTAL	14890	9451	9167	10093	9237	25748	41778	49432	37185	18495	16959	8435
MEAN	480	315	296	326	330	831	1393	1595	1239	597	547	281
MAX	582	370	340	390	576	1180	2080	2320	1720	824	1430	422
MIN	314	262	249	270	249	348	912	843	808	373	345	214
AC-FT	29530	18750	18180	20020	18320	51070	82870	98050	73760	36680	33640	16730

CAL YR 1988 TOTAL 262590 MEAN 717 MAX 3000 MIN 249 AC-FT 520800
WTR YR 1989 TOTAL 250870 MEAN 687 MAX 2320 MIN 214 AC-FT 497600

e Estimated

09365500 LA PLATA RIVER AT HESPERUS, CO

LOCATION.--Lat 37°17'23", long 108°02'24", in NE¼SW¼ sec.14, T.35 N., R.11 W., La Plata County, Hydrologic Unit 14080105, on right bank at Hesperus 700 ft downstream from U.S. Highway 160.

DRAINAGE AREA.--37 mi², approximately.

PERIOD OF RECORD.--June to August 1904, May 1905 to September 1906, August to November 1910, June 1917 to current year. Monthly discharge only for some periods, published in WSP 1313. Records for Nov. 11 to Dec. 31, 1910, published in WSP 289, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1243: 1906(M). WSP 1563: 1923 (monthly figures only). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 8,104.71 ft above National Geodetic Vertical Datum of 1929. Prior to May 1, 1920, nonrecording gage, and May 1, 1920, to May 24, 1927, water-stage recorder, at several sites about 600 ft downstream at different datums. May 25, 1927, to Sept. 30, 1938, water-stage recorder at site 60 ft downstream and Oct. 1, 1938, to Sept. 30, 1941, at present site at datum 1.00 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 16, 19-22, Nov. 26 to Dec. 6, Dec. 9-14, 16, 17, Dec. 20 to Jan. 23, Jan. 26, Jan. 29 to Feb. 1, Feb. 5-9, 14-18, 20-23, and Mar. 3-6. Records good except for estimated daily discharges, which are fair. Cherry Creek ditch exports water upstream from station for irrigation of about 2,000 acres in Cherry Creek drainage.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--73 years (water years 1906, 1918-89), 45.1 ft³/s; 32,670 acre-ft/yr.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood observed occurred Oct. 5, 1911.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 230 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 30	1430	---	*a3.95	May 9	0100	*143	2.84

Minimum daily discharge, 4.9 ft³/s, Sept. 18.
a-Backwater from ice.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	8.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	42	46	19	57	6.9
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	44	18	42	6.6
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	42	41	17	33	6.6
4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	36	16	29	6.9
5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	48	32	15	25	8.6
6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	14	[illegible]	[illegible]	34	14	23	7.2
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	17	[illegible]	[illegible]	29	14	21	6.8
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	114	31	14	20	6.6
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	27	13	23	6.3
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	114	27	12	18	6.0
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	12	17	5.8
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	33	14	17	6.0
13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	68	27	12	15	6.8
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	47	26	11	14	6.2
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	35	25	10	13	5.7
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	29	9.4	12	5.5
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	31	8.9	12	5.2
18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	30	8.0	14	4.9
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	35	7.4	13	5.3
20	11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	51	39	8.0	12	7.6
21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	47	138	67	37	8.6	12	7.5
22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	57	134	70	30	15	11	6.5
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	68	112	76	27	34	9.9	6.1
24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	77	114	82	27	34	9.3	5.8
25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	73	26	28	8.3	5.5
26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	92	67	24	33	8.3	5.4
27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	78	74	69	23	60	8.4	5.3
28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	68	62	75	22	31	8.2	5.3
29	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	71	21	27	7.6	5.2
30	[illegible]	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	61	22	26	7.4	5.2
31	[illegible]	---	[illegible]	[illegible]	---	[illegible]	---	51	---	29	7.1	---
TOTAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1948	909	578.3	525.0	185.3
MEAN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	97.3	62.8	30.3	18.7	17.0	6.18
MAX	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	123	46	60	57	8.6
MIN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11	45	20	20	7.4	7.1	4.9
AC-FT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3860	1800	1150	1050	368

CAL YR 1988 TOTAL [illegible] MEAN [illegible] MAX [illegible] MIN [illegible] AC-FT 24660
WTR YR 1989 TOTAL [illegible] MEAN [illegible] MAX 138 MIN 4.9 AC-FT 19640

09366500 LA PLATA RIVER AT COLORADO-NEW MEXICO STATE LINE

LOCATION.--Lat 36°59'51", long 108°11'17", in NW¼SE¼ sec.10, T.32 N., R.13 W., La Plata County, CO, Hydrologic Unit 14080105, on right bank at Colorado-New Mexico State line, 0.2 mi downstream from Ponds Arroyo, and 4.8 mi north of La Plata, NM.

DRAINAGE AREA.--331 mi².

PERIOD OF RECORD.--January 1920 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1313: 1934(M), 1936(M).

GAGE.--Water-stage recorder. Datum of gage is 5,975.15 ft above National Geodetic Vertical Datum of 1929. See WSP 1713 or 1733 for history of changes prior to Mar. 17, 1934.

REMARKS.--Estimated daily discharges: Nov. 27 to Dec. 6, Dec. 9-17, Dec. 22 to Feb. 1, and Feb. 5-11. Records good except for estimated daily discharges, which are fair. Diversions upstream from station for irrigation of about 15,000 acres, mostly upstream from station.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--69 years, 36.3 ft³/s; 26,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,750 ft³/s, Aug. 24, 1927, gage height, [illegible] ft, present datum, from rating curve extended above 700 ft³/s, on basis of slope-area measurement of peak flow; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, [illegible] ft³/s at [illegible] July [illegible], gage height, [illegible] ft; minimum daily, 1.7 ft³/s, July 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	5.3	12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	4.6	6.9	14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	3.6	9.6	14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	3.6	10	14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5	[illegible]	11	14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	[illegible]	11	14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	[illegible]	11	15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	[illegible]	13	15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9	[illegible]	[illegible]	14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	[illegible]	[illegible]	14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11	9.5	[illegible]	14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12	[illegible]	[illegible]	14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13	7.5	[illegible]	14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
14	[illegible]	[illegible]	14	14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15	9.3	16	14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	[illegible]	[illegible]	14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17	8.4	[illegible]	14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18	7.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19	7.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	[illegible]	16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
22	8.1	16	14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	8.4	[illegible]	14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	8.7	16	14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	8.0	15	12	[illegible]	29	96	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	5.8	10	10	[illegible]	34	96	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	5.7	10	12	[illegible]	34	93	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	4.5	10	[illegible]	18	---	73	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	4.8	12	14	18	---	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31	4.9	---	14	[illegible]	---	[illegible]	---	[illegible]	---	[illegible]	[illegible]	---
TOTAL	224.8	394.8	428	520	655	2101	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MEAN	7.25	13.2	13.8	16.8	23.4	67.8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAX	10	16	15	23	34	93	74	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIN	3.6	5.3	10	10	10	28	31	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AC-FT	446	783	849	1030	1300	4170	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CAL YR 1988 TOTAL 10162.6 MEAN 27.8 MAX 93 MIN 3.6 AC-FT [illegible]
WTR YR 1989 TOTAL 8272.3 MEAN 22.7 MAX 99 MIN 1.7 AC-FT [illegible]

09371000 MANCOS RIVER NEAR TOWAOC, CO

LOCATION.--Lat 37°01'39", long 108°44'27", Ute Indian Reservation, Montezuma County, Hydrologic Unit 14080107, on left bank 700 ft upstream from bridge on U.S. Highway 666, 2.0 mi north of Colorado-New Mexico State line, 6.0 mi upstream from Aztec Creek, and 12 mi south of Towaoc.

DRAINAGE AREA.--526 mi².

PERIOD OF RECORD.--Streamflow records, October 1920 to September 1943, February 1951 to current year. Monthly discharge only for some periods, published in WSP 1313. Water-quality data available, August 1969 to June 1972, October 1983 to current year. Sediment data available, April to December 1961.

REVISED RECORDS.--WSP 1733: 1924 (monthly figures only). WDR CO-83-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,055.98 ft above National Geodetic Vertical Datum of 1929. See WSP 1713 or 1733 for history of changes prior to Mar. 11, 1954.

REMARKS.--Estimated daily discharges: Nov. 21-27, Nov. 30 to Dec 21, Dec. 23 to Feb. 15, Mar. 9-18, 20, 21, 25-30, Apr. 8-28, May 6-8, 16-21, June 1-11, June 14 to July 13, 16-24, July 28 to Aug. 1, and Aug. 25 to Sept. 30. Records fair except for flows above 600 ft³/s and those for estimated daily discharges, which are poor. Diversions for irrigation of about 10,000 acres upstream from station. One diversion upstream from station for irrigation of about 100 acres downstream from station. Flow regulated by Jackson Gulch Reservoir, capacity, 10,000 acre-ft since March 1949.

AVERAGE DISCHARGE.--61 years, 54.0 ft³/s; 39,120 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,300 ft³/s, Oct. 14, 1941, gage height, 7.30 ft, present site and datum, from rating curve extended above 200 ft³/s, on basis of slope-area measurement of peak flow; maximum gage height, 8.50 ft, Sept. 6, 1970; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
July 26	0500	750	4.25	Aug. 2	0300	1,160	4.89
July 31	unknown	*1,460	*5.22				

No flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	20	18	13	16	97	92	19	.01	.00	200	.00
2	20	19	18	13	17	97	97	14	.00	.00	361	.00
3	18	19	19	14	17	84	87	8.7	.00	.00	55	.00
4	15	19	19	14	16	63	82	6.2	.00	.00	37	.00
5	15	18	18	14	15	48	86	3.8	.00	.00	29	.00
6	19	16	17	14	13	43	88	1.6	.00	.00	25	.00
7	20	16	17	14	11	80	100	.40	.00	.00	22	.00
8	20	16	16	14	13	114	100	1.4	.00	.00	13	.00
9	20	16	13	14	15	130	90	9.3	.00	.00	4.9	.00
10	20	21	13	14	15	130	80	27	.00	.00	11	.00
11	18	23	13	14	16	130	75	33	.01	.00	15	.00
12	16	46	13	14	16	120	65	22	.98	.00	15	.00
13	15	32	12	14	16	140	50	20	1.2	.01	15	.00
14	15	25	12	14	18	150	100	17	.01	1.1	12	.00
15	15	34	12	14	22	130	180	5.5	.00	.31	9.3	.00
16	14	39	13	15	27	120	110	1.4	.00	.01	7.3	.00
17	13	27	13	15	30	110	60	1.4	.00	.00	5.5	.00
18	12	26	13	15	34	100	55	1.0	.00	.00	5.5	.00
19	12	26	12	15	39	102	85	.60	.00	.00	6.4	.00
20	13	17	12	15	36	100	110	.20	.00	.00	10	.00
21	14	17	12	15	31	100	120	.80	.00	.00	6.4	.00
22	14	17	12	15	30	98	130	11	.00	.00	4.3	.00
23	13	18	12	15	35	100	120	13	.00	.00	3.7	.00
24	14	18	12	15	43	123	65	11	.00	.01	1.8	.00
25	13	18	12	15	64	150	90	7.7	.00	16	.01	.00
26	14	18	12	15	93	170	110	7.0	.00	150	.00	.00
27	13	16	11	15	134	190	95	5.8	.00	99	.00	.00
28	14	9.9	11	15	124	170	50	4.4	.00	44	.00	.00
29	14	13	12	15	---	150	35	3.0	.00	60	.00	.00
30	14	15	12	15	---	130	26	3.6	.00	180	.00	.00
31	18	---	12	16	---	111	---	1.2	---	510	.00	---
TOTAL	486	634.9	423	449	956	3580	2633	262.00	2.21	1060.44	875.11	0.00
MEAN	15.7	21.2	13.6	14.5	34.1	115	87.8	8.45	.074	34.2	28.2	.00
MAX	21	46	19	16	134	190	180	33	1.2	510	361	.00
MIN	12	9.9	11	13	11	43	26	.20	.00	.00	.00	.00
AC-FT	964	1260	839	891	1900	7100	5220	520	4.4	2100	1740	.0

CAL YR 1988 TOTAL 11808.34 MEAN 32.3 MAX 234 MIN .34 AC-FT 23420
WTR YR 1989 TOTAL 11361.66 MEAN 31.1 MAX 510 MIN .00 AC-FT 22540

09371002 NAVAJO WASH NEAR TOWAOC, CO

LOCATION.--Lat 37°12'03", long 108°41'50", Ute Mountain Ute Indian Reservation, Montezuma County, Hydrologic Unit 14080107, on left bank 150 ft upstream from Towaoc Road crossing, 0.2 mi downstream from Ismay Draw and 1.6 mi east of Towaoc, Co.

DRAINAGE AREA.--26.3 mi².

PERIOD OF RECORD.--October 1986 to September 1988, April to September 1989.

GAGE.--Water-stage recorder. Elevation of gage is 5,600 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 30, 1986, (fragmentary) USBR operated staff gage or water-stage recorder at same site and datum.

REMARKS.--Estimated daily discharges: Apr. 1-5. Records fair except for estimated daily discharges, and flows above 77 ft³/s, which are poor. Flow regulated by Montezuma Valley Irrigation District through series of canals and ditches from Dolores Project. Most of water is return flow. Diversions from Dolores River basin to San Juan River basin for irrigation of about 2450 acres upstream from station. No diversions upstream for irrigation downstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 366 ft³/s, July 31, 1989, gage height, 5.63 ft, on the basis of slope conveyance computation at gage-height 5.63 ft; minimum daily observed, 0.47 ft³/s, Mar. 28, 1988, but may have been less during period of no record Oct. 1 to Apr. 5, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 366 ft³/s at 2300 July 31, gage height, 5.63 ft; minimum daily observed, 0.77 ft³/s, Sept. 28, but may have been less during period of no record Oct. 1 to Apr. 5, 1989.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	8.0	13	9.2	7.4	55	7.3
2	---	---	---	---	---	---	8.5	13	11	6.7	18	6.7
3	---	---	---	---	---	---	8.0	11	10	8.1	13	4.3
4	---	---	---	---	---	---	7.5	9.2	11	5.9	11	3.3
5	---	---	---	---	---	---	8.0	13	12	7.1	8.5	4.5
6	---	---	---	---	---	---	8.1	15	13	6.7	5.1	5.4
7	---	---	---	---	---	---	7.4	14	13	5.5	1.5	3.8
8	---	---	---	---	---	---	6.6	13	13	4.4	5.8	8.7
9	---	---	---	---	---	---	6.4	12	12	5.4	7.1	11
10	---	---	---	---	---	---	7.8	14	11	6.7	10	12
11	---	---	---	---	---	---	9.2	14	10	5.9	6.8	17
12	---	---	---	---	---	---	12	16	11	7.0	11	21
13	---	---	---	---	---	---	12	18	9.2	11	6.8	21
14	---	---	---	---	---	---	8.0	19	7.1	8.3	6.1	17
15	---	---	---	---	---	---	6.1	18	8.2	11	8.0	14
16	---	---	---	---	---	---	7.0	16	8.9	10	7.1	2.5
17	---	---	---	---	---	---	5.3	17	9.9	7.4	3.7	11
18	---	---	---	---	---	---	6.9	14	13	5.9	5.4	6.4
19	---	---	---	---	---	---	14	11	13	4.9	12	1.4
20	---	---	---	---	---	---	12	8.0	11	4.9	16	.99
21	---	---	---	---	---	---	7.9	7.7	9.6	11	18	1.3
22	---	---	---	---	---	---	11	6.9	11	12	17	1.3
23	---	---	---	---	---	---	10	6.7	9.2	4.0	14	1.3
24	---	---	---	---	---	---	11	6.7	7.4	8.7	10	2.2
25	---	---	---	---	---	---	10	5.9	5.9	5.9	6.5	1.3
26	---	---	---	---	---	---	10	5.6	9.2	11	1.8	.99
27	---	---	---	---	---	---	14	5.6	10	14	2.4	1.2
28	---	---	---	---	---	---	15	5.5	9.6	9.2	1.8	.77
29	---	---	---	---	---	---	15	5.4	10	8.3	1.3	1.9
30	---	---	---	---	---	---	15	5.8	9.2	9.9	4.2	1.2
31	---	---	---	---	---	---	---	8.9	---	25	5.4	---
TOTAL	---	---	---	---	---	---	287.7	348.9	307.6	259.2	300.3	192.75
MEAN	---	---	---	---	---	---	9.59	11.3	10.3	8.36	9.69	6.42
MAX	---	---	---	---	---	---	15	19	13	25	55	21
MIN	---	---	---	---	---	---	5.3	5.4	5.9	4.0	1.3	.77
AC-FT	---	---	---	---	---	---	571	692	610	514	596	382

09371500 McELMO CREEK NEAR CORTEZ, CO

LOCATION.--Lat 37°19'23", long 108°40'22", in NE¼ sec.1, T.35N., R.17 W., Montezuma County, Hydrologic Unit 14080202, on left bank 150 ft downstream from mouth of Mud Creek, and 4 mi southwest of Cortez.

DRAINAGE AREA.--230 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1926 to September 1929, April 1940 to September 1945, October 1950 to September 1954 (monthly discharge only for some periods, published in WSP 1313), January 1982 to current year.

REVISED RECORDS.--WSP 1313: 1927, 1927 (M).

GAGE.--Water-stage recorder. Elevation of gage is 5,700 ft above National Geodetic Vertical Datum of 1929, by barometer. Prior to Sept. 30, 1929, at site 3 mi downstream at different datum. Mar. 29, 1940 to Nov. 2, 1941, at site 150 ft upstream at datum 4.20 ft, higher. Nov. 3, 1941 to Sept. 30, 1945, at present site at datum 4.00 ft, higher. Oct. 1, 1950 to Sept. 30, 1954, at present site at datum 2.50 ft, higher, Jan. 1, 1982, to present, at former site at same datum.

REMARKS.--Estimated daily discharges: Oct. 5-11, Nov. 12 to Feb. 14, and Sept. 27-30. Records good except for those above 225 ft³/s, which are fair, and estimated daily discharges, which are poor. Diversions for irrigation of about 200 acres upstream from station. Flow is mainly return flows from irrigated lands for Montezuma Irrigation District (water imported from Dolores River basin).

AVERAGE DISCHARGE.--19 years (water years 1927-29, 1941-45, 1951-54, 1983-89), 56.4 ft³/s; 40,860 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,560 ft³/s, Sept. 9, 1927, gage height, 6.45 ft, from rating curve extended above 240 ft³/s, on basis of slope-area measurement at gage height, 5.72 ft; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 460 ft³/s at 0500 Aug. 1, gage height, 5.36 ft; minimum daily, 20 ft³/s, Feb. 6, Apr. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	45	46	28	32	39	24	58	63	63	317	58
2	63	43	50	28	32	39	23	54	59	61	224	64
3	59	42	50	30	32	46	21	56	59	62	117	54
4	50	42	48	30	28	42	20	61	59	60	93	63
5	46	40	48	30	24	37	21	59	54	53	88	73
6	44	38	48	28	20	37	23	52	54	53	86	68
7	44	37	46	28	24	38	27	45	63	60	84	63
8	44	45	40	28	26	38	33	49	70	59	69	67
9	46	60	34	28	28	42	29	52	74	60	60	62
10	50	57	32	28	28	39	27	58	75	61	61	70
11	50	104	32	28	28	36	26	58	72	75	70	75
12	47	80	30	28	28	39	26	60	71	113	77	72
13	47	80	30	28	30	43	23	64	66	54	68	73
14	49	100	36	28	34	38	31	64	61	51	60	60
15	49	85	36	28	44	36	49	65	61	53	63	58
16	48	75	34	28	53	32	41	68	52	57	64	48
17	52	70	32	28	63	28	32	76	52	52	63	41
18	51	65	30	28	35	28	30	69	52	47	100	37
19	52	60	28	28	99	30	34	65	52	44	89	36
20	49	60	28	28	80	30	41	62	52	44	85	43
21	46	65	28	26	61	29	46	56	54	44	107	41
22	45	65	28	26	57	29	46	47	58	45	96	39
23	43	70	26	28	68	31	49	42	55	57	80	38
24	42	70	26	28	77	29	46	42	55	111	67	38
25	43	70	26	28	75	34	46	49	56	96	64	37
26	43	55	24	28	65	37	50	51	49	99	67	36
27	44	48	24	28	58	42	54	58	42	106	67	36
28	40	48	24	28	45	31	56	59	44	110	75	38
29	36	46	26	28	---	28	55	57	58	92	65	38
30	62	46	26	30	---	25	55	56	54	101	59	36
31	50	---	28	32	---	24	---	59	---	87	59	---
TOTAL	1499	1811	1044	876	1324	1076	1084	1771	1746	2130	2744	1562
MEAN	48.4	60.4	33.7	28.3	47.3	34.7	36.1	57.1	58.2	68.7	88.5	52.1
MAX	65	104	50	32	99	46	56	76	75	113	317	75
MIN	36	37	24	26	20	24	20	42	42	44	59	36
AC-FT	2970	3590	2070	1740	2630	2130	2150	3510	3460	4220	5440	3100

CAL YR 1988 TOTAL 21783 MEAN 59.5 MAX 275 MIN 22 AC-FT 43210
WTR YR 1989 TOTAL 18667 MEAN 51.1 MAX 317 MIN 20 AC-FT 37030

09371500 McELMO CREEK NEAR CORTEZ, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Jan. 1, 1982 to current year. Water-quality analysis since August 1987.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Feb. 6, 1982 to current year.
WATER TEMPERATURES: Feb. 6, 1982 to current year.

INSTRUMENTATION.--Water-quality monitor since January 1982.

REMARKS.--Stream is not well mixed at location of monitor. Specific conductance readings from the monitor may not represent mean specific conductance of the entire stream. Daily maximum and minimum specific conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum 4,180 microsiemens Jan. 31, 1985; minimum, 785 microsiemens Aug. 30, 1988.
WATER TEMPERATURES: Maximum 26.5°C July 18,19 1985; minimum, 0.0°C many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum 4,030 microsiemens Sept. 23, 24; minimum, 1,110 microsiemens Sept. 14.
WATER TEMPERATURES: Maximum 25.0°C July 22; minimum 0.0°C, many days during November through February.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
OCT											
11...	1330	52	2060	--	12.0	1200	990	270	130	110	1
DEC											
02...	1430	69	--	7.6	0.5	1400	1200	300	170	170	2
JAN											
20...	1230	26	--	8.5	0.0	1800	1500	370	220	220	2
FEB											
24...	0900	68	2490	8.0	1.5	1200	990	240	150	160	2
MAR											
29...	1145	26	3190	8.2	11.0	1600	1300	310	200	230	3
MAY											
01...	1400	61	1920	8.6	13.0	860	640	190	94	89	1
JUN											
05...	1200	53	1740	8.3	16.5	880	640	200	92	87	1
JUL											
17...	1300	54	1520	8.5	20.0	800	570	180	84	78	1
31...	1000	88	1690	8.5	18.0	770	540	180	78	71	1
AUG											
29...	1215	69	1740	8.4	16.0	850	660	200	85	77	1
SEP											
26...	1300	37	2190	8.4	14.0	1100	950	260	120	110	1

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
OCT										
11...	4.8	223	1100	23	0.40	10	1790	2.43	251	1.30
DEC										
02...	4.2	292	1600	29	0.30	11	2470	3.36	461	2.90
JAN										
20...	4.7	338	2000	40	0.40	12	3090	4.20	217	4.90
FEB										
24...	5.2	226	1400	31	0.40	9.5	2140	2.91	393	2.30
MAR										
29...	4.7	252	1900	41	0.40	8.5	2870	3.90	201	5.00
MAY										
01...	5.4	222	830	18	0.40	9.5	1370	1.87	226	0.99
JUN										
05...	4.8	236	730	16	0.30	12	1290	1.75	184	0.90
JUL										
17...	3.9	226	740	15	0.30	11	1250	1.70	182	[illegible]
31...	5.0	228	700	15	0.30	13	1230	1.67	292	0.62
AUG										
29...	4.0	190	760	18	0.40	11	1270	1.73	237	[illegible]
SEP										
26...	4.0	195	1100	21	0.40	7.2	1730	2.35	173	1.40

09371500 McELMO CREEK NEAR CORTEZ, CO--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1690	2600	---	3350	3340	3140	3360	---	---	1700	2300	1720
2	1690	2630	---	3420	3390	3200	3350	---	---	1780	1950	1630
3	1720	2630	3080	3370	3370	3320	3380	---	---	1710	1810	1610
4	1850	2640	3000	3350	3420	3360	3360	---	---	1740	1780	1520
5	1900	2620	2880	3140	3350	3370	3300	---	---	1820	1730	1590
6	1900	2630	3080	3360	3820	3300	3190	---	1610	1750	1670	1580
7	1930	2650	3240	3640	3920	3390	2860	---	1700	---	1680	1510
8	1910	2640	3240	3750	3610	3430	2210	---	1750	---	1710	1610
9	1830	2440	3170	3740	---	3300	2440	---	1740	---	1590	1340
10	1890	2500	3170	3620	3180	3190	2540	---	1730	---	1540	---
11	1970	2560	3140	3510	3250	3270	2930	---	1980	---	1560	---
12	2050	2640	3210	3500	3090	3260	2590	---	1920	---	1600	---
13	2100	2510	3160	3560	3370	2860	2490	---	2040	1550	1630	---
14	2120	2470	3160	3550	3410	2910	2370	---	1690	1600	1700	1370
15	2110	2460	3210	3490	3260	2940	2150	---	1660	1730	1690	1380
16	2110	2520	3140	3510	3150	3020	---	---	1770	---	1640	1450
17	2080	2420	3130	3540	2900	3360	---	---	1770	---	1690	2040
18	2050	2490	3220	3510	2730	3360	---	---	1750	---	1790	2180
19	2040	2510	3240	3490	2500	3150	---	---	1690	---	1790	2220
20	2070	2460	3220	3470	2760	3110	---	---	1940	---	1690	2150
21	2120	---	3250	3450	2770	3050	---	---	1750	---	1640	2170
22	2140	---	3140	3440	2750	2930	---	---	1720	---	1690	2280
23	2130	---	3030	3440	2620	2880	---	---	---	---	1620	2850
24	2200	---	2920	3410	2500	3110	---	---	---	---	1590	2570
25	2200	---	3170	3450	2580	2740	---	---	---	---	1660	2310
26	2200	---	2900	3540	2710	2540	---	---	---	---	1800	2360
27	2190	---	2970	3590	2890	2810	---	---	1760	---	2500	2280
28	2130	---	3340	3570	3060	3040	---	---	1810	---	1790	1930
29	2070	---	3480	3550	---	3170	---	---	1780	---	1700	1850
30	2310	---	3440	3510	---	3230	---	---	1830	---	1720	1830
31	2630	---	3490	3400	---	3280	---	---	---	---	1730	---
MEAN	2040	---	---	3490	---	3130	---	---	---	---	1740	---

SAN JUAN RIVER BASIN

09371500 McELMO CREEK NEAR CORTEZ, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.4	9.7	10.3	6.3	---	---	.0	.0	.1	.0	7.6	1.7
2	15.6	9.8	9.6	6.2	---	---	.0	.0	.2	.0	4.3	3.1
3	15.6	10.1	10.1	5.8	.3	.0	.1	.0	.1	.0	5.1	2.2
4	13.0	10.5	9.7	6.8	.6	.0	.1	.0	.2	.0	5.1	.2
5	15.2	10.0	8.2	4.7	.7	.0	.1	.0	.0	.0	6.0	.2
6	15.3	12.2	7.8	3.8	.8	.0	.1	.0	.0	.0	7.9	1.0
7	15.7	12.1	8.4	4.1	1.4	.1	.0	.0	.0	.0	9.8	3.2
8	14.3	9.8	8.7	4.8	2.9	.6	.0	.0	.1	.0	12.7	5.6
9	13.7	9.2	10.1	7.3	.7	.0	.0	.0	.2	.0	12.9	6.3
10	13.7	8.6	8.0	5.2	.2	.0	.1	.0	.2	.0	12.4	6.4
11	13.6	8.2	7.7	6.5	.3	.0	.0	.0	.1	.0	11.0	6.5
12	12.3	8.2	6.3	4.2	.5	.0	.1	.0	.1	.0	10.4	6.7
13	13.6	8.9	6.9	3.5	.9	.0	.1	.0	.2	.0	11.4	5.9
14	13.4	9.1	7.4	4.5	2.0	.0	.1	.0	.4	.0	10.4	5.1
15	13.5	8.5	6.7	3.6	2.9	.1	.1	.0	.4	.0	9.7	3.4
16	13.3	8.3	3.7	1.3	1.1	.0	.1	.0	.5	.0	12.5	5.0
17	13.5	8.3	4.6	2.7	.6	.0	.1	.0	.7	.0	12.1	6.4
18	13.5	8.3	3.2	1.6	3.8	.0	.1	.0	1.2	.0	11.9	5.0
19	13.0	8.2	2.9	.4	2.6	1.7	.1	.0	1.0	.2	12.5	6.0
20	12.4	7.5	2.8	.0	2.8	1.1	.1	.0	1.6	.1	10.7	6.4
21	12.1	7.2	---	---	1.2	.0	.1	.0	1.9	.0	11.6	3.7
22	11.8	6.9	---	---	.1	.0	.1	.0	2.9	.0	12.7	4.8
23	11.6	6.8	---	---	.1	.0	.1	.0	5.8	.9	14.2	6.3
24	11.3	6.5	---	---	.0	.0	.1	.0	6.4	1.2	14.8	6.3
25	11.0	6.3	---	---	.1	.0	.1	.0	7.0	2.8	12.4	6.8
26	10.5	5.7	---	---	.1	.0	.1	.0	7.9	3.0	9.4	7.6
27	10.5	5.5	---	---	.0	.0	.1	.0	7.9	4.1	12.1	6.4
28	11.0	5.9	---	---	.0	.0	.1	.0	7.0	2.1	14.4	6.0
29	10.0	6.5	---	---	.0	.0	.1	.0	---	---	13.7	7.3
30	11.2	7.6	---	---	.0	.0	.1	.0	---	---	13.2	5.2
31	10.8	6.9	---	---	.0	.0	.1	.0	---	---	14.3	4.6
MONTH	15.7	5.5	---	---	---	---	.1	.0	7.9	.0	14.8	.2

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.6	6.8	14.7	7.0	20.3	12.1	22.4	14.7	19.9	17.1	19.6	12.7
2	12.7	5.7	16.3	8.6	20.7	12.9	22.4	13.7	20.0	16.2	19.7	12.8
3	14.7	7.4	16.4	10.0	19.4	12.7	22.7	13.7	21.5	16.4	19.7	13.6
4	14.7	6.2	17.0	9.2	19.6	12.7	23.4	14.2	23.0	17.3	18.3	14.5
5	15.3	5.8	17.1	8.1	19.8	13.9	24.2	15.2	22.1	15.9	19.0	14.1
6	16.7	6.7	18.8	9.8	19.6	12.0	23.2	16.2	22.3	16.0	19.3	14.1
7	17.5	7.9	19.8	10.9	20.5	11.7	23.7	15.7	22.2	15.3	18.8	14.0
8	16.2	8.6	20.0	11.3	19.7	13.5	24.4	16.7	23.2	16.3	18.4	14.5
9	16.6	8.6	18.1	12.1	18.6	12.5	23.4	17.2	21.8	17.2	17.2	11.3
10	15.6	8.7	17.7	13.3	19.2	14.1	21.3	17.2	23.2	17.1	16.9	11.3
11	16.3	8.6	16.3	11.0	20.5	12.0	22.8	17.5	21.8	17.3	16.5	11.8
12	11.6	7.9	12.1	8.7	16.8	13.5	22.0	16.8	22.8	17.4	15.6	12.7
13	15.6	5.2	13.7	7.7	19.9	11.8	24.0	16.3	22.4	16.1	15.6	10.7
14	14.8	6.5	14.6	9.8	19.6	12.6	23.5	16.3	22.7	15.6	15.6	8.9
15	15.2	8.3	14.5	10.9	22.3	13.6	23.8	16.3	22.5	16.5	15.7	9.3
16	17.5	9.5	14.4	9.8	21.8	15.1	22.8	15.3	22.4	15.9	14.4	9.2
17	18.3	10.0	17.1	9.3	22.1	14.2	22.7	15.8	20.0	15.6	16.9	10.1
18	19.1	11.3	18.6	10.2	23.4	14.6	22.7	14.5	20.9	15.7	17.9	13.4
19	17.2	10.0	19.6	11.9	21.1	15.1	23.7	15.7	21.0	16.3	16.6	10.8
20	16.7	11.1	20.0	11.9	20.3	15.8	23.6	16.9	19.1	15.7	16.9	12.5
21	16.9	11.1	20.6	14.2	16.1	12.1	24.4	16.9	19.4	14.6	16.0	9.7
22	14.9	11.8	19.9	12.0	17.6	9.3	25.0	17.4	20.6	14.5	16.5	9.6
23	17.2	9.3	20.3	12.2	20.3	11.8	22.4	18.4	20.0	14.0	17.4	11.6
24	16.7	9.5	20.2	12.6	20.3	12.6	21.8	17.4	19.3	13.0	17.2	11.1
25	15.2	9.2	19.1	11.5	20.3	13.1	22.5	16.8	18.9	12.4	16.3	10.1
26	15.2	8.5	19.7	11.2	21.2	12.1	19.3	16.3	19.0	12.2	16.0	10.4
27	15.3	7.7	20.0	13.1	20.4	12.7	21.0	15.8	18.9	13.7	16.6	11.1
28	14.9	7.9	20.4	13.0	20.9	14.7	21.0	16.8	19.5	12.6	16.3	11.0
29	13.7	7.2	20.0	13.4	21.9	14.7	22.2	17.2	19.6	12.7	16.1	10.7
30	12.4	6.8	19.2	13.0	22.9	14.9	21.2	15.9	20.4	14.0	15.5	10.6
31	---	---	19.4	11.0	---	---	23.6	16.2	20.3	14.5	---	---
MONTH	19.1	5.2	20.6	7.0	23.4	9.3	25.0	13.7	23.2	12.2	19.7	8.9

09372000 McELMO CREEK NEAR COLORADO-UTAH STATE LINE

LOCATION.--Lat 37°19'27", long 109°00'54", in NE¼ sec.2, T.35 N., R.20 W., Montezuma County, Hydrologic Unit 14080202, on right bank 1.5 mi upstream from Colorado-Utah State line, 2.0 mi upstream from Yellowjacket Creek, and 2.0 mi west of former town of McElmo.

DRAINAGE AREA.--346 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Streamflow records, March 1951 to current year. Water-quality data available, November 1977 to September 1981, and August 1987 to current year.

REVISED RECORDS.--WSP 1925: 1951-52 (M), 1957 (M). WRD CO-1972: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,890 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 10-14, 18-23, 25-27, Dec. 31 to Jan. 8, Jan. 10 to Feb. 15, and Aug. 1-29. Records good except for those above 200 ft³/s, which are fair, and estimated daily discharges, which are poor. Diversions for irrigation of about 1,780 acres upstream from station. One diversion upstream from station for irrigation of about 60 acres downstream from station. Part of flow is return water from irrigated lands of Montezuma Irrigation District (water imported from Dolores River basin).

AVERAGE DISCHARGE.--38 years, 49.4 ft³/s; 35,790 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,040 ft³/s, Aug. 7, 1967, gage height, 7.58 ft, from floodmark in gage well, from rating curve extended above 2,100 ft³/s; maximum gage height, 8.13 ft, Sept. 6, 1970; minimum daily discharge, 0.08 ft³/s, Sept. 9-10, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 620 ft³/s, and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
July 24	2000	836	5.35	July 31	2200	*2,170	*7.50
July 26	2200	1,290	6.49				

Minimum daily discharge, 11 ft³/s, Apr. 14, May 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	62	57	32	36	49	25	32	40	24	270	43
2	76	57	54	32	36	47	25	28	37	30	345	50
3	71	56	59	34	36	47	24	21	39	25	160	57
4	69	56	55	34	34	51	22	25	50	21	95	46
5	67	53	56	34	33	42	21	35	44	21	70	54
6	49	49	56	34	36	42	17	36	36	21	65	57
7	49	49	56	32	32	42	14	22	40	21	65	47
8	47	51	52	32	38	42	24	16	47	26	60	50
9	49	71	45	32	33	43	24	13	53	31	53	49
10	54	74	38	32	32	44	22	16	47	29	46	53
11	49	104	38	31	32	42	19	23	63	28	46	56
12	43	163	36	32	32	40	18	28	53	54	50	56
13	42	94	34	32	32	43	17	34	57	53	55	63
14	41	88	36	32	34	49	11	47	46	33	53	52
15	43	152	44	32	38	42	21	39	33	32	46	51
16	47	115	38	32	49	39	43	41	35	35	46	46
17	49	88	38	33	65	34	29	49	32	38	45	46
18	51	81	45	32	87	37	14	49	37	30	59	36
19	49	77	34	32	127	34	13	32	32	28	75	33
20	44	73	32	32	103	33	21	36	34	36	65	37
21	49	71	32	33	94	33	26	15	34	33	65	36
22	49	73	32	33	71	33	24	26	33	33	75	34
23	45	75	33	33	81	35	17	16	41	33	70	37
24	45	73	33	34	85	35	22	11	37	146	65	33
25	44	84	33	33	87	35	27	18	34	108	53	36
26	49	81	29	33	75	41	25	29	20	225	43	36
27	45	65	28	32	67	47	31	37	13	139	50	34
28	44	56	29	32	56	42	33	41	13	131	51	33
29	41	57	29	32	---	37	34	25	16	119	51	29
30	54	57	29	32	---	37	25	33	21	127	44	29
31	74	---	33	33	---	36	---	34	---	359	45	---
TOTAL	1595	2300	1221	993	1510	1221	722	909	1129	2038	2368	1305
MEAN	51.5	76.7	39.4	32.0	53.9	39.4	24.1	29.3	37.6	65.7	76.4	43.5
MAX	76	163	59	34	127	51	43	47	63	359	345	63
MIN	41	49	28	32	32	33	11	11	13	21	43	29
AC-FT	3160	4560	2420	1970	3000	2420	1430	1800	2240	4040	4700	2590

CAL YR 1988 TOTAL 21984 MEAN 60.1 MAX 173 MIN 19 AC-FT 43610
WTR YR 1989 TOTAL 17314 MEAN 47.4 MAX 359 MIN 11 AC-FT 34340

09372000 MCELMO CREEK NEAR COLORADO-UTAH STATE LINE CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: November 1977 to September 1981, August 1987 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO
OCT											
11...	1130	52	2320	--	12.0	1100	860	240	120	140	2
DEC											
02...	1150	40	3250	8.0	2.0	1500	1200	320	180	190	2
JAN											
20...	1120	38	3070	8.6	0.0	1700	1400	350	210	230	2
FEB											
24...	1230	103	2870	8.4	7.0	1500	1200	290	190	200	2
MAR											
29...	1040	33	3200	8.2	12.0	1500	1300	290	190	210	2
MAY											
01...	1130	39	2420	8.4	13.0	1100	850	230	130	140	2
JUN											
05...	1000	52	2300	8.4	16.0	1100	850	240	130	130	2
JUL											
17...	1100	46	2260	8.4	20.0	1000	720	220	110	120	2
31...	1200	100	--	8.2	22.0	890	670	210	89	120	2
AUG											
29...	1000	58	2010	8.6	16.0	1000	760	220	110	110	2
SEP											
26...	1100	37	2630	8.3	15.0	1300	1100	270	150	160	2

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
OCT										
11...	5.4	239	1200	26	0.40	9.6	1890	2.57	265	0.58
DEC										
02...	4.7	304	1700	36	0.40	12	2640	3.58	285	2.40
JAN										
20...	4.9	322	1900	44	0.40	13	2960	4.02	304	3.10
FEB										
24...	5.8	273	1600	36	0.40	11	2510	3.41	697	2.20
MAR										
29...	5.2	244	1700	38	0.40	8.8	2600	3.53	229	2.30
MAY										
01...	6.1	259	1000	26	0.50	9.4	1700	2.31	179	1.00
JUN										
05...	6.0	285	1100	26	0.40	13	1820	2.48	257	0.84
JUL										
17...	5.6	280	1000	23	0.40	13	1660	2.26	207	0.74
31...	6.0	222	970	20	0.40	16	1570	2.13	423	0.73
AUG										
29...	5.2	241	910	22	0.40	12	1540	2.09	241	0.56
SEP										
26...	5.1	229	1300	29	0.40	6.0	2060	2.80	206	0.33

TRANSMOUNTAIN DIVERSIONS FROM COLORADO RIVER BASIN IN COLORADO

There are 24 tunnels or ditches, all of which are equipped with water-stage recorders and Parshall flumes or sharp-crested weirs. Records provided by Colorado Division of Water Resources. The locations and diversions of 8 selected diversions are given in the following list.

TO PLATTE RIVER BASIN

09010000 Grand River ditch diverts water from tributaries of Colorado River to La Poudre Pass Creek (tributary to Cache la Poudre River) in NW¼ sec.21, T.6 N., R.75 W., in Platte River basin. Two collection ditches beginning at headgates located in sec.28, T.5 N., R.76 W., and sec.29, T.6 N., R.75 W., intercept all tributaries upstream on each side of the Colorado River and converge at La Poudre Pass.

REVISIONS (WATER YEARS).--WSP 1313: 1912-27.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09010000	0	0	0	0	0	0	88	3,400	8,970	4,630	1,570	189

Water year 1989, 18,840

09013000 Alva B. Adams tunnel diverts water from Grand Lake and Shadow Mountain Lake in NW¼ sec.9, T.3 N., R.75 W., in Colorado River basin, to Lake Estes (Big Thompson River) in sec.30, T.5 N., R.72 W., in Platte River basin. For daily discharge, see elsewhere in this report.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09013000	25,980	23,330	24,680	24,310	19,850	13,240	9,810	19,590	18,860	30,450	33,670	30,720

Water year 1989, 274,500

09021500 Berthoud Pass ditch diverts water from tributaries of Fraser River between headgate in sec.33, T.2 S., R.75 W., and Berthoud Pass, in Colorado River basin, to Hoop Creek (tributary to West Fork Clear Creek) in sec.10, T.3 S., R.75 W., in Platte River basin.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09021500	0	0	0	0	0	0	0	3.0	318	341	150	32

Water year 1989, 843

09050590 Harold D. Roberts tunnel diverts water from Dillon Reservoir (Blue River) in sec.18, T.5 S., R.77 W., in Blue River basin, to North Fork South Platte River (tributary to South Platte, River) in SW¼SW¼ sec.4, T.7 S., R.74 W., in Platte River basin. Figures include a small amount of ground-water inflow between Dillon Reservoir and east portal of tunnel.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09050590	11	2,540	5,790	5,890	5,320	1,270	0	2,650	15,080	21,170	11,260	3,350

Water year 1989, 74,360

TO ARKANSAS RIVER BASIN

09042000 Hoosier Pass tunnel diverts water from tributaries of Blue River in Colorado River basin to Montgomery Reservoir (Middle Fork South Platte River) in sec.14, T.8 S., R.78 W., in Platte River basin; this water is again diverted to South Catamount Creek (tributary to Catamount Creek) in SE¼ sec.14, T.13 S., R.69 W., in the Arkansas River basin. Collection conduits extending from the right bank of Crystal Creek (tributary to Spruce Creek) in sec.14, T.7 S., R.78 W., right bank of Spruce Creek in sec.23, T.7 S., R.78 W., right bank of McCullough Gulch in sec.26, T.7 S., R.78 W., right bank of Monte Cristo Creek in SW¼NE¼ sec.2, T.8 S., R.78 W., left bank of Bemrose Creek in SW¼SW¼ sec.6, T.8 S., R.77 W., and intercepting intermediate tributaries, transport diversions to north portal of the tunnel.

REVISIONS (WATER YEARS).--WDR CO-86-1, WDR CO-86-2: 1984, 1985.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09042000	158	0	0	0	0	0	67	1,690	3,490	4,060	1,410	0

Water year 1989, 10,870

TRANSMOUNTAIN DIVERSIONS FROM COLORADO RIVER BASIN IN COLORADO--Continued

TO ARKANSAS RIVER BASIN--Continued

09063700 Homestake tunnel diverts water from Homestake Lake (Middle Fork Homestake Creek), in sec.17, T.8 S., R.81 W., in Eagle River basin, to Lake Fork in sec.9, T.9 S., R.81 W., in Arkansas River basin. Water is imported to Homestake Lake from tributaries of Homestake Creek by collection conduits that extend from right bank of French Creek in sec.28, T.7 S., R.81 W., and left bank of East Fork Homestake Creek in sec.9, T.8 S., R.81 W., and intercept intermediate tributaries.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09063700	5,290	4,770	0	0	0	0	1,670	3,790	1,460	2,640	3,700	3,530

Water year 1989, 26,850

09077160 Charles H. Bousted tunnel diverts water from the main stem and tributaries of Fryingpan River (tributary to Roaring Fork River), in Colorado River basin, to Lake Fork in sec.10, T.9 S., R.81 W., in Arkansas River basin. Water is transported to west portal of tunnel (at lat 39°14'44", long 106°31'47"), by a series of collection conduits extending between headgates on right bank of Sawyer Creek at lat 39°15'58", long 106°38'19" and right bank of Fryingpan River at lat 39°14'40", long 106°31'49", and intercepting intermediate tributaries.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09077160	0	0	0	0	0	0	1,800	17,080	15,560	2,520	275	0

Water year 1989, 37,240

09077500 Busk-Ivanhoe tunnel diverts water from Ivanhoe Lake (Ivanhoe Creek), tributary to Fryingpan River in sec.13, T.9 S., R.82 W., in Roaring Fork River basin, to Busk Creek (tributary to Lake Fork) in sec. 20, T.9 S., R.81 W., in Arkansas River basin.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09077500	51	2.0	0	0	0	0	50	1,250	1,770	466	137	39

Water year 1989, 3,770

TRANSMOUNTAIN DIVERSIONS NO LONGER PUBLISHED

Following is a list of Transmountain Diversions no longer being published in this report. Diversions, in acre-feet, for these sites are available from the State of Colorado, Division of Water Resources.

TO PLATTE RIVER BASIN

09012000	Eureka ditch
09022500	Moffat Water tunnel
09046000	Boreas Pass ditch
09047300	Vidler tunnel

TO ARKANSAS RIVER BASIN

09061500	Columbine ditch
09062000	Ewing ditch
09062500	Wurtz ditch
09073000	Twin Lakes tunnel
09115000	Larkspur ditch

TO RIO GRANDE BASIN

09118200	Tarbell ditch
09121000	Tabor ditch
09341000	Treasure Pass ditch
09347000	Don LaFont ditches 1&2
09348000	Williams Cr-Squaw Pass ditch
09351000	Pine River-Weminuche Pass ditch
09351500	Weminuche Pass ditch

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in three tables. The first is a table of discharge measurements at low-flow partial-record stations; the second is a table of annual maximum stage and discharge at crest-stage stations; and the third is a table containing discharge measurements made at miscellaneous sites for both low flow and high flow are given in a fourth table.

LOW-FLOW PARTIAL-RECORD STATIONS

Measurements of streamflow in the area covered by this report made at low-flow, partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 1989

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Date	Discharge (ft³/s)
*[illegible]	[illegible] Creek near Minturn, [illegible]	Lat [illegible], long 106°23'50", in Eagle County, on left bank [illegible] mi upstream from mouth, [illegible] mi north of Minturn.	0.76	1965-89	10-04-88	0.02
					10-31-89	0.01
					6-21-89	0.72
					7-18-89	0.06

*Also a crest-stage partial-record station.

CREST-STAGE PARTIAL-RECORD STATIONS

The following table contains annual maximum discharge for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter.

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1989

Station no.	Station name	Location	Drainage area (mi²)	Non-contributing	Period of record	Date	Gage height (feet)	Discharge (ft³/s)
		PINEY RIVER BASIN						
*09058900	Moniger Creek near Minturn, CO	Lat 39°43'37", long 106°28'50", in Eagle County, on left bank 1.5 mi upstream from mouth, 7.5 mi north of Minturn.	0.76	-	1965-89	5-21-89	2.05	29
		COLORADO RIVER BASIN						
09061450	Sweetwater Creek at mouth near Dotsero, CO	Lat 39°43'20", long 107°02'22", in NW¼NE¼ sec.9, T.4 S., R.86 W., Eagle County, 5.3 mi north of Dotsero.	105	-	1979-89	5-30-89	8.38	142
09091100	Mamm Creek near Silt, CO	Lat 39°43'54", long 107°42'48", in NW¼NW¼ sec.18, T.6 S., R.92 W., Garfield County, 3.3 mi southeast of Silt.	63.3	-	1979-89	unknown	11.66	355
		GUNNISON RIVER BASIN						
09149450	Dry Creek near Olathe, CO	Lat 39°33'19", long 108°02'43", SW¼NE¼ sec. 36, T.50 N., R.11 W., Montrose County, 4.9 mi southwest of Olathe.	102	-	1979-89	9-17-89	1.60	118
		SAN JUAN RIVER BASIN						
09361400	Junction Creek near Durango, CO	Lat 37°20'04", long 107°54'35", sec.36, T.36N., R.10 W., La Plata County, on left bank 4.5 mi upstream from mouth and 4.5 mi northwest of Durango.	26.3	-	1959-66, 1972, 1979-89	4-10-89	3.07	97

* Also a low-flow partial-record station.

401751107062000 UPPER FOIDEL CREEK PRECIPITATION GAGE, NEAR OAK CREEK, CO

LOCATION.--Lat 40°17'51", long 107°06'20", in SE¼SE¼ sec. 24, T.5 N., R.87 W., Routt County, Hydrologic Unit 14050001, and 8.7 mi northwest of Oak Creek.

METEOROLOGICAL DATA

SITE.--Altitude is 8,050 ft above National Geodetic Vertical Datum of 1929, from topographic map.

SNOW-COURSE DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Depth (inches)	Water Content (inches)	Density (percent)
Mar			
7...	43.8	12.2	27.9

RAINFALL RECORDS

PERIOD OF RECORD.--January 1976 to current year.

INSTRUMENTATION.--Belfort weighing bucket rain-gage

REMARKS.--Unpublished rainfall data for water years 1976-86 are available in district office.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	.08	.10	.00	.00	.00	.00
2	---	---	---	---	---	---	.20	.12	.00	.00	.07	.00
3	---	---	---	---	---	---	.10	.41	.00	.00	.00	.00
4	---	---	---	---	---	---	.00	.30	.43	.00	.07	.00
5	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
6	---	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
7	---	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
8	---	---	---	---	---	.00	.00	.00	.00	.04	.00	.05
9	---	---	---	---	---	.00	.00	.00	.01	.49	.00	.00
10	---	---	---	---	---	.00	.00	.00	.02	.01	.00	.00
11	---	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
12	---	---	---	---	---	.00	.00	.10	.00	.00	.17	.22
13	---	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
14	---	---	---	---	---	.02	.00	.37	.00	.00	.00	.00
15	---	---	---	---	---	.00	.06	.00	.00	.00	.00	.00
16	---	---	---	---	---	.00	.08	.00	.17	.00	.00	.00
17	---	---	---	---	---	.00	.00	.00	.00	.00	.04	.00
18	---	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
19	---	---	---	---	---	.17	.00	.00	.00	.00	.10	.00
20	---	---	---	---	---	.00	.00	.00	.00	.00	.10	.00
21	---	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
22	---	---	---	---	---	.00	.00	.00	.00	.40	.00	.00
23	---	---	---	---	---	.02	.02	.00	.00	.60	.00	.00
24	---	---	---	---	---	.00	.00	.00	.00	.00	.00	.13
25	---	---	---	---	---	.00	.00	.00	.00	.00	.00	.54
26	---	---	---	---	---	.00	.00	.00	.05	.00	.00	.00
27	---	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
28	---	---	---	---	---	.00	.00	.00	.00	.10	.00	.00
29	---	---	---	---	---	.22	.00	.00	.00	.00	.00	.00
30	---	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
31	---	---	---	---	---	.10	---	.00	---	.00	.00	---
TOTAL	---	---	---	---	---	---	0.54	1.40	0.68	1.64	0.55	0.94
MAX	---	---	---	---	---	---	.20	.41	.43	.60	.17	.54
MIN	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00

09010500 COLORADO RIVER BELOW BAKER GULCH, NEAR GRAND LAKE, CO. (LAT 40 19 33N LONG 105 51 22W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
05...	1510	14	38	7.5	17...	1715	84	58	10.0
NOV					JUN				
02...	1600	9.5	73	4.0	21...	1700	145	48	6.5
DEC					JUL				
14...	1300	7.8	73	0.0	14...	0945	42	75	10.0
FEB 1989					AUG				
17...	1245	5.1	78	0.0	16...	1710	19	68	15.0
MAR					SEP				
22...	1000	7.5	81	0.0	14...	1755	18	71	12.0
APR									
13...	1620	13	74	2.5					

09022000 FRASER RIVER AT UPPER STATION, NEAR WINTER PARK, CO. (LAT 39 50 45N LONG 105 45 05W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
04...	0930	4.8	45	1.5	16...	1045	15	84	2.0
NOV					JUN				
01...	1010	3.4	70	0.0	20...	1330	51	46	6.5
DEC					JUL				
12...	1110	3.0	73	0.0	11...	1205	22	54	8.5
FEB 1989					AUG				
15...	1100	1.5	80	0.0	15...	1130	12	62	8.0
MAR					SEP				
20...	1155	2.2	120	0.7	13...	1125	6.9	73	3.0
APR									
12...	1125	4.0	143	0.0					

09024000 FRASER RIVER NEAR WINTER PARK, CO. (LAT 39 54 00N LONG 105 46 34W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
04...	1125	6.8	47	5.0	16...	1200	13	83	5.5
NOV					JUN				
01...	1210	6.2	74	1.5	20...	1625	11	66	12.0
DEC					JUL				
12...	1235	4.7	97	0.0	11...	1440	7.2	77	15.5
FEB 1989					AUG				
15...	1240	3.5	133	0.0	15...	1245	13	68	10.5
MAR					SEP				
20...	1320	3.9	161	4.0	13...	1320	11	75	5.0
APR									
12...	1250	5.4	133	6.0					

09025000 VASQUEZ CREEK AT WINTER PARK, CO. (LAT 39 55 13N LONG 105 47 05W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
06...	0830	5.5	32	3.0	17...	0845	15	50	2.0
NOV					JUN				
02...	0815	3.7	60	--	21...	0835	7.9	43	5.5
DEC					JUL				
13...	0950	4.1	53	0.0	12...	0900	9.9	45	9.0
FEB 1989					AUG				
16...	0930	3.9	60	0.0	16...	0735	12	46	7.0
MAR					SEP				
21...	0945	1.6	69	0.0	14...	0840	9.6	50	0.0
APR									
14...	1530	3.3	81	3.5					

09025400 ELK CREEK NEAR FRASER, CO. (LAT 39 55 09N LONG 105 49 31W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
04...	1325	0.72	30	7.5	18...	0900	5.5	50	4.0
NOV					JUN				
03...	1245	0.92	54	2.5	22...	1550	1.4	44	12.0
DEC					JUL				
12...	1445	0.86	55	0.0	14...	1510	1.7	45	16.0
FEB 1989					AUG				
16...	1105	0.55	60	0.0	17...	1500	0.66	52	10.5
MAR					SEP				
21...	1300	0.45	59	0.0	15...	1215	0.94	53	3.5
APR									
14...	1005	1.6	60	0.0					

09026500 ST. LOUIS CREEK NEAR FRASER, CO. (LAT 39 54 36N LONG 105 52 40W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 06...	1230	7.8	51	4.5	APR 1989 14...	1150	7.2	96	0.5
NOV 03...	0930	7.4	88	2.0	MAY 18...	1125	24	77	4.5
DEC 12...	1630	6.7	90	0.0	JUN 22...	1500	19	74	10.0
FEB 1989 16...	1600	5.0	77	0.0	JUL 12...	1215	19	90	10.0
MAR 21...	1500	7.3	95	0.0	AUG 17...	0950	16	74	6.5

09032000* RANCH CREEK NEAR FRASER, CO. (LAT 39 57 00N LONG 105 45 54W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 06...	1000	0.68	34	4.0	MAY 1989 16...	1700	11	43	5.0
NOV 03...	1140	5.2	55	2.0	JUN 22...	1145	4.2	43	5.0
DEC 13...	1150	2.6	51	0.0	JUL 12...	1835	4.7	52	10.0
FEB 1989 16...	1315	1.6	50	0.0	AUG 15...	1535	3.9	47	11.0
MAR 21...	1130	2.4	56	0.0	SEP 13...	1635	6.2	51	5.5
APR 14...	1315	2.9	75	2.5					

09032100 CABIN CREEK NEAR FRASER, CO. (LAT 39 59 09N LONG 105 44 40W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 04...	1645	1.9	26	6.5	MAY 1989 16...	1530	10	35	4.0
NOV 01...	1515	1.8	40	2.0	JUN 22...	1205	9.0	25	--
DEC 13...	1415	1.3	49	0.0	JUL 14...	1215	4.6	50	11.0
FEB 1989 15...	1600	0.94	--	0.0	AUG 17...	1345	3.4	43	11.5
MAR 20...	1605	1.7	48	0.0	SEP 15...	1410	2.1	45	1.5
APR 12...	1545	1.4	46	0.5					

09034250 COLORADO RIVER AT WINDY GAP, NEAR GRANBY, CO. (LAT 40 06 30N LONG 105 58 13W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
NOV 1988 29...	1045	66	138	1.0	MAY 1989 31...	1720	[illegible]	112	8.0
FEB 1989 22...	1740	73	140	0.0	JUN 01...	0955	[illegible]	138	12.0
MAR 30...	0950	146	158	2.5	JUL 11...	1710	166	153	16.0

09034900 BOBTAIL CREEK NEAR JONES PASS, CO. (LAT 39 45 [illegible] LONG 105 54 [illegible])

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 03...	1430	2.1	64	3.0	JUN 1989 19...	1950	57	31	6.0
DEC 07...	1305	1.3	--	0.5	JUL 25...	1335	13	45	7.5
FEB 1989 22...	1330	0.92	68	0.0	AUG 31...	1340	4.1	55	11.5
MAR 30...	1215	0.87	81	0.0	SEP 22...	1410	3.1	61	5.0
MAY 11...	1400	11	46	1.0					

09035500 WILLIAMS FORK BELOW STEELMAN CREEK, CO. (LAT 39 46 44N LONG [illegible])

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 [illegible]	1120	0.62	55	[illegible]	JUN 1989 19...	[illegible]	[illegible]	[illegible]	4.0
DEC 07...	1305	0.55	[illegible]	0.0	JUL 25...	1150	17	42	8.0
FEB 1989 23...	1215	0.48	75	0.0	AUG 30...	1140	[illegible]	49	7.5
MAY 11...	1345	12	41	3.0	SEP 27...	1230	3.2	53	1.5

09035700 WILLIAMS FORK ABOVE DARLING CREEK, NEAR LEAL, CO. (LAT [illegible] LONG [illegible])

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 13...	1100	11	61	3.5	MAY 1989 17...	[illegible]	[illegible]	[illegible]	[illegible]
NOV 15...	1130	8.2	65	0.0	JUN 07...	[illegible]	[illegible]	[illegible]	[illegible]
DEC 22...	1400	6.1	68	0.0	20...	[illegible]	[illegible]	[illegible]	[illegible]
FEB 1989 15...	1420	4.8	68	0.0	JUL 20...	[illegible]	[illegible]	[illegible]	[illegible]
MAR 23...	1520	4.8	70	1.0	AUG 17...	[illegible]	[illegible]	[illegible]	[illegible]
APR 21...	1335	19	51	5.5	SEP 23...	[illegible]	[illegible]	[illegible]	[illegible]

09035800 DARLING CREEK NEAR LEAL, CO. (LAT [illegible])

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 [illegible]...	[illegible]	[illegible]	72	[illegible]	MAY 1989 [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
NOV 13...	[illegible]	[illegible]	71	[illegible]	JUN [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
DEC [illegible]...	1515	[illegible]	75	[illegible]	[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
FEB 1989 [illegible]...	1520	[illegible]	76	[illegible]	JUL [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
MAR [illegible]...	1345	[illegible]	79	[illegible]	AUG [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
APR [illegible]...	[illegible]	[illegible]	71	4.9	SEP [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]

[illegible] SOUTH FORK OF WILLIAMS FORK NEAR LEAL, CO. [illegible]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 13...	1300	[illegible]	85	[illegible]	MAY 1989 [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
NOV 15...	1330	11	[illegible]	[illegible]	JUN [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
DEC 23...	[illegible]	[illegible]	93	0.0	[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
FEB 1989 21...	[illegible]	[illegible]	86	[illegible]	JUL [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
MAR 17...	[illegible]	[illegible]	93	[illegible]	AUG [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
APR [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	SEP [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]

[illegible] WILLIAMS FORK NEAR LEAL, CO. [illegible]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	MAY 1989 [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
NOV [illegible]...	[illegible]	[illegible]	79	[illegible]	JUN [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
DEC 21...	[illegible]	16	[illegible]	[illegible]	[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
FEB 1989 [illegible]...	[illegible]	16	[illegible]	[illegible]	JUL [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
MAR 17...	1415	16	99	1.0	AUG [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
APR [illegible]...	[illegible]	[illegible]	76	[illegible]	SEP [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]

[illegible] TROUBLESOME CREEK NEAR PEARMONT, CO. [illegible]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	MAY 1989 [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
NOV [illegible]...	[illegible]	[illegible]	88	[illegible]	JUN [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
DEC [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	JUL [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
FEB 1989 17...	[illegible]	[illegible]	[illegible]	[illegible]	AUG [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
MAR [illegible]...	[illegible]	5.7	78	[illegible]	SEP [illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
APR [illegible]...	[illegible]	11	85	[illegible]					

09046490 BLUE RIVER AT BLUE RIVER, CO. (LAT 39 27 21N LONG 106 01 52W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 13...	1105	15	75	6.0	MAY 1989 15...	1310	45	80	3.0
NOV 18...	1040	11	45	3.0	JUN 07...	1030	74	65	4.0
DEC 21...	0950	8.1	35	1.0	JUL 13...	1030	46	90	5.0
MAR 1989 01...	1000	5.6	60	0.5	AUG 09...	1020	40	110	11.0
30...	1255	6.5	120	1.5	SEP 27...	1050	17	130	10.0
APR 19...	1405	22	60	5.0					

09046600 BLUE RIVER NEAR DILLON, CO. (LAT 39 32 55N LONG 106 02 19W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 13...	1410	54	40	5.0	MAY 1989 12...	0850	239	180	2.0
NOV 18...	1420	45	50	2.0	JUN 07...	1425	286	120	5.0
DEC 21...	1430	32	120	2.0	JUL 13...	1350	154	130	4.0
FEB 1989 28...	1735	21	75	3.0	AUG 09...	1325	85	150	7.0
MAR 31...	0950	28	45	1.0	SEP 27...	1415	59	120	8.0
APR 24...	1430	151	110	3.0					

09047500 SNAKE RIVER NEAR MONTEZUMA, CO. (LAT 39 36 20N LONG 105 56 33W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 14...	1320	29	95	5.0	MAY 1989 12...	1055	94	180	1.0
NOV 15...	1450	22	30	1.0	JUN 09...	1345	218	[illegible]	5.0
DEC 23...	1325	16	80	0.0	JUL 14...	1350	127	180	4.0
MAR 1989 01...	1450	11	45	2.0	AUG 08...	1115	68	200	7.0
24...	1200	13	60	1.0	SEP 20...	1320	45	75	5.0
APR 25...	1030	62	50	1.5					

09047700 KEYSTONE GULCH NEAR DILLON, CO. (LAT 39 35 40N LONG 105 58 19W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 14...	1010	3.3	40	5.0	MAY 1989 15...	1450	14	85	1.0
NOV 15...	1245	4.0	40	1.0	JUN 09...	1045	15	130	5.0
DEC 23...	0945	3.3	30	0.0	JUL 14...	1115	7.1	110	5.0
MAR 1989 01...	1230	2.6	30	1.0	AUG 08...	1525	6.1	150	7.0
24...	0940	1.8	50	1.0	SEP 20...	1045	[illegible]	75	[illegible]
APR 25...	1230	8.3	40	1.5					

09050100 TENMILE CREEK BELOW NORTH TENMILE CREEK, AT FRISCO, CO. (LAT 39 34 37N LONG 106 06 33W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 05...	1230	22	580	7.0	MAY 1989 23...	1640	445	297	9.5
25...	1300	18	616	4.0	JUN 23...	1255	345	322	7.5
DEC 19...	1145	29	773	0.5	JUL 20...	1600	83	470	16.0
FEB 1989 13...	1300	14	660	1.5	AUG 29...	1020	34	522	7.0
MAR 27...	1030	22	835	6.0	SEP 19...	1525	31	576	12.0
APR 19...	0940	52	557	2.0					

09050700 BLUE RIVER BELOW DILLON, CO. (LAT 39 37 30N LONG 106 [illegible] 57W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 25...	1120	102	256	5.5	MAY 1989 23...	1305	193	[illegible]	[illegible]
DEC 02...	1455	55	231	4.5	JUN 19...	1608	956	[illegible]	[illegible]
FEB 1989 13...	1050	43	261	3.5	JUL 20...	1215	93	[illegible]	[illegible]
MAR 27...	1505	94	276	3.5	AUG 29...	1225	56	[illegible]	[illegible]
APR 18...	1300	99	271	4.5	SEP 19...	1255	48	[illegible]	[illegible]

09051050 STRAIGHT CREEK BELOW LASKEY GULCH NEAR DILLON, CO (LAT 39 35 23N LONG 106 02 23W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
05...	1115	6.9	109	5.0	23...	1130	50	108	5.5
28...	1345	5.0	109	2.5	JUN				
DEC					19...	1030	54	69	9.5
02...	1330	5.3	143	3.5	JUL				
FEB 1989					20...	1100	19	95	9.5
24...	1015	4.2	173	1.0	AUG				
MAR					29...	1540	9.2	[illegible]	11.5
27...	[illegible]	5.7	[illegible]	4.0	SEP				
APR					19...	1140	4.2	[illegible]	7.5
19...	[illegible]	8.9	[illegible]	4.5					

[illegible] CREEK NEAR DILLON, CO. (LAT 39 [illegible])

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
[illegible]	[illegible]	[illegible]	[illegible]	4.0	11...	[illegible]	[illegible]	[illegible]	[illegible]
NOV					JUN				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DEC					JUL				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
FEB 1989					AUG				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAR					SEP				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
APR									
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					

[illegible] STATION, NEAR DILLON, CO. [illegible]

[illegible] NEAR DILLON, CO. [illegible]

[illegible]

SUPPLEMENTAL WATER-QUALITY DATA FOR GAGING STATIONS--Continued

09055300 CATARACT CREEK NEAR KREMMLING, CO. (LAT 39 50 07N LONG 106 13 57W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 11...	1420	1.5	30	6.0	MAY 1989 10...	1340	63	80	[illegible]
NOV 16...	1400	1.5	45	1.5	JUN 08...	1550	57	125	4.0
16...	1420	1.5	45	1.5	JUL 10...	1130	29	85	[illegible]
DEC 19...	1325	1.1	30	0.0	AUG 02...	1445	30	150	[illegible]
FEB 1989 16...	1355	1.5	30	0.0	SEP 20...	1050	1.9	[illegible]	[illegible]
MAR [illegible]...	[illegible]	1.8	55	1.0					
APR [illegible]...	[illegible]	[illegible]	[illegible]	1.5					

[illegible] COLORADO RIVER NEAR KREMMLING, CO. (LAT [illegible] LONG [illegible])

09059500 PINEY RIVER NEAR STATE BRIDGE, CO. (LAT 39 48 00N LONG 106 35 55W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAR 1989				
04...	1545	12	424	19.0	22...	1445	15	376	[illegible]
14...	1100	12	--	--	MAY				
NOV					17...	[illegible]	[illegible]	[illegible]	[illegible]
08...	1440	11	403	5.0	24...	[illegible]	[illegible]	[illegible]	[illegible]
DEC					JUN				
13...	1410	12	426	0.0	05...	[illegible]	[illegible]	[illegible]	[illegible]

[illegible] ROCK CREEK AT CRATER, CO. (LAT [illegible] LONG [illegible])

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
04...	0935	4.4	[illegible]	[illegible]	16...	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	4.4	--	[illegible]	16...	[illegible]	[illegible]	[illegible]	[illegible]
NOV					JUN				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DEC					27...	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				
MAR 1989					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
APR					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					

[illegible]

[illegible]

[illegible]

[illegible]

09063900 MISSOURI CREEK NEAR GOLD PARK, CO. (LAT 39 23 25N LONG 106 28 10W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
06...	0955	2.3	34	2.5	23...	1512	25	22	4.0
NOV					JUN				
03...	1340	0.70	48	1.0	06...	1610	15	22	5.5
DEC					20...	1535	17	18	9.0
07...	1355	0.94	43	0.0	JUL				
MAR 1989					19...	1653	12	24	14.5
01...	1408	0.25	--	0.0	AUG				
28...	1413	0.76	38	0.5	29...	1130	4.6	27	9.5
APR									
24...	1530	[illegible]	39	0.3					

[illegible] HOMESTAKE CREEK AT GOLD PARK, CO. (LAT 39 24 [illegible] LONG 106 [illegible] 08W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
06...	[illegible]	[illegible]	[illegible]	[illegible]	23...	1740	73	25	4.5
NOV					JUN				
[illegible]	[illegible]	[illegible]	39	[illegible]	06...	[illegible]	39	22	7.5
DEC					20...	1626	40	21	[illegible]
[illegible]	[illegible]	[illegible]	43	[illegible]	JUL				
MAR 1989					19...	[illegible]	[illegible]	21	[illegible]
[illegible]	[illegible]	[illegible]	--	[illegible]	AUG				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1503	[illegible]	26	[illegible]
APR									
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					

[illegible]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
[illegible]	[illegible]	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

09066000 BLACK GORE CREEK NEAR MINTURN, CO. (LAT 39 35 47N LONG 106 15 52W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
12...	1110	3.0	172	2.5	16...	1020	39	118	7.0
NOV					JUN				
17...	1055	2.9	182	0.5	06...	1010	63	85	5.5
DEC					19...	1035	40	94	6.5
21...	1130	2.1	188	0.0	JUL				
JAN 1989					19...	1045	7.8	[illegible]	8.5
31...	1040	1.7	220	0.0	AUG				
MAR					16...	1105	5.3	[illegible]	[illegible]
16...	1115	2.5	332	0.5	SEP				
APR					14...	1010	4.2	[illegible]	[illegible]
13...	1020	4.0	320	1.5					
26...	1215	24	150	3.0					

09066100 BIGHORN CREEK NEAR MINTURN, CO. (LAT 39 38 24N LONG 106 17 34W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
12...	1335	1.3	65	3.0	16...	[illegible]	11	[illegible]	[illegible]
NOV					JUN				
17...	1335	0.91	73	[illegible]	06...	[illegible]	[illegible]	[illegible]	[illegible]
DEC					20...	[illegible]	[illegible]	[illegible]	[illegible]
19...	1510	0.86	73	[illegible]	JUL				
JAN 1989					19...	[illegible]	[illegible]	[illegible]	[illegible]
31...	[illegible]	[illegible]	[illegible]	[illegible]	AUG				
MAR					16...	[illegible]	[illegible]	[illegible]	[illegible]
16...	[illegible]	[illegible]	[illegible]	[illegible]	SEP				
APR					13...	[illegible]	[illegible]	[illegible]	[illegible]
13...	[illegible]	1.8	[illegible]	[illegible]					

[illegible] PITKIN CREEK NEAR MINTURN, CO. (LAT [illegible])

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
12...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NOV					JUN				
17...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DEC					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19...	[illegible]	[illegible]	[illegible]	[illegible]	JUL				
JAN 1989					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AUG				
MAR					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	1545	[illegible]	[illegible]	[illegible]	SEP				
APR					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					

[illegible] [illegible] CREEK NEAR MINTURN, CO. (LAT [illegible])

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NOV					JUN				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DEC					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	JUL				
JAN 1989					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AUG				
MAR					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	SEP				
APR					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					

[illegible] [illegible] CREEK NEAR MINTURN, CO. (LAT [illegible])

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NOV					JUN				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DEC					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	JUL				
JAN 1989					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AUG				
MAR					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	SEP				
APR					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)

09066400 RED SANDSTONE CREEK NEAR MINTURN, CO. (LAT 39 40 58N LONG 106 24 [illegible]W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
[illegible]...	1450	1.0	111	5.5	25...	1835	58	57	[illegible]
NOV					JUN				
[illegible]...	0840	[illegible].66	[illegible]	[illegible]	[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
DEC					[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]...	[illegible]	[illegible].94	[illegible]	[illegible]	JUL				
FEB 1989					[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]...	[illegible]	[illegible]	--	[illegible]	AUG				
MAR					[illegible]...	[illegible]	[illegible].4	[illegible]	[illegible]
[illegible]...	--	[illegible]	[illegible]	--					
APR									
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]					

[illegible] EAGLE RIVER BELOW GYPSUM, CO. (LAT 39 39 [illegible]N LONG 106 57 [illegible]W)

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
09074000 HUNTER CREEK NEAR ASPEN, CO. (LAT 39 12 21N LONG 106 47 49W)									
OCT 1988					MAY 1989				
04...	1550	[illegible].4	80	8.5	2[illegible]...	15[illegible]	108	[illegible]	[illegible]
NOV					JUN				
[illegible]...	1630	[illegible].9	75	1.0	[illegible]...	[illegible]	79	[illegible]	[illegible]
DEC					[illegible]...	[illegible]	55	[illegible]	[illegible]
[illegible]...	[illegible]	[illegible]	90	0.0	JUL				
FEB 1989					[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]...	[illegible]	[illegible]	85	[illegible]	AUG				
MAR					[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]...	1600	[illegible]	7[illegible]	[illegible]					
APR									
[illegible]...	[illegible]	35	[illegible]	[illegible]					
[illegible] CASTLE CREEK ABOVE ASPEN, CO. (LAT [illegible])									
OCT 1988					MAY 1989				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]									
[illegible]									
[illegible]									
[illegible]									
[illegible]									

09081600 CRYSTAL RIVER ABOVE AVALANCHE CREEK, NEAR REDSTONE, CO. (LAT 39 13 56N LONG 107 13 36W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 05...	1325	76	655	11.5	MAY 1989 24...	1525	963	185	10.5
NOV 16...	1335	54	665	4.5	JUN 07...	1415	863	192	11.0
MAR 1989 01...	1415	49	595	6.0	21...	1440	950	160	7.0
29...	1315	138	510	6.0	JUL 19...	1230	226	280	14.0
APR 26...	1415	572	265	6.5	AUG 16...	1255	135	465	15.5

09085000 ROARING FORK RIVER AT GLENWOOD SPRINGS, CO. (LAT 39 32 37N LONG 107 19 44W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 07...	1330	524	676	12.0	MAY 1989 25...	0945	2560	197	10.0
DEC 14...	1135	493	560	1.5	JUN 07...	0955	2350	322	9.0
FEB 1989 15...	1115	366	642	1.0	29...	0750	2050	374	12.0
MAR 23...	1125	479	610	8.5	AUG 24...	0800	616	671	15.0
APR 19...	[illegible]	1130	396	9.0					

09085100 COLORADO RIVER BELOW GLENWOOD SPRINGS, CO. (LAT 39 33 18N LONG 107 20 12W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	MAY 1989 17...	[illegible]	[illegible]	523	11.0
NOV [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	24...	[illegible]	[illegible]	360	11.5
DEC [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	JUN 07...	[illegible]	[illegible]	400	15.0
FEB 1989 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	29...	[illegible]	[illegible]	[illegible]	16.0
MAR [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	JUL [illegible]	[illegible]	[illegible]	774	17.5
APR [illegible]	[illegible]	[illegible]	465	[illegible]	AUG [illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible] WEST DIVIDE CREEK NEAR RAVEN, CO. [illegible]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	MAY 1989 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NOV [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DEC [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
FEB 1989 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	JUN [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAR [illegible]	[illegible]	[illegible]	425	4.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
APR [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	29...	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	19...	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	JUL [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAY [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AUG [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
					SEP [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible] COLORADO RIVER NEAR DE BEQUE, CO. [illegible]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	MAY 1989 18...	[illegible]	[illegible]	[illegible]	[illegible]
NOV [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	JUN [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DEC [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	JUL [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAR 1989 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AUG [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
APR [illegible]	[illegible]	[illegible]	[illegible]	[illegible]					

09095500 COLORADO RIVER NEAR CAMEO, CO. (LAT 39 14 20N LONG 108 16 00W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988				
05...	1100	1750	1120	13.0
12...	1100	1840	1130	10.0
12...	1200	0.0	1130	10.0
19...	1100	1600	1230	11.0
19...	1300	1600	1230	11.0
26...	1100	3.5	1180	8.0
26...	1200	1570	1180	8.5
NOV				
02...	1100	1500	1240	7.0
09...	1100	1650	1230	7.5
09...	1200	1650	1230	7.5
16...	1000	1860	1160	4.0
23...	1200	1570	1410	3.0
30...	1200	1620	1380	0.5
DEC				
07...	0900	1460	1260	1.5
07...	1100	1460	1260	1.5
MAR 1989				
02...	1100	1490	1270	3.5
02...	1400	1490	1270	3.5
08...	1400	1500	1370	7.0
16...	1400	1750	1120	6.5
22...	1400	1770	1140	8.0
28...	1045	2360	--	--
APR				
05...	1000	1880	1110	7.5
05...	1400	1880	1100	7.5
12...	1400	2700	860	11.5
19...	1100	3540	684	13.0
26...	1000	4860	479	11.0
MAY 1989				
03...	1000	2840	752	12.5
10...	1100	5380	522	14.5
10...	1350	5380	522	14.5
17...	1000	4420	545	11.5
24...	0900	7480	406	12.0
31...	0900	7950	360	12.0
31...	1200	8010	360	12.0
JUN				
07...	1015	5500	531	14.0
14...	1100	5340	564	14.5
22...	1000	4970	507	13.0
22...	1300	4970	507	13.0
27...	0900	4160	675	17.0
JUL				
05...	1200	3080	720	20.0
11...	1100	2660	837	21.0
19...	0900	2200	1000	20.5
19...	1000	2200	1000	20.5
26...	1100	2900	808	21.0
AUG				
01...	0945	2700	782	21.0
09...	0940	2150	980	20.5
16...	1000	2380	--	19.5
16...	1400	2380	880	19.5
23...	0910	2380	875	18.0
30...	1010	2130	930	16.5
SEP				
06...	1000	2000	940	16.5
06...	1400	2000	940	16.5
13...	1200	1970	1010	14.0
20...	1000	1800	1210	16.0
28...	1055	1970	1020	14.0

09105000 PLATEAU CREEK NEAR CAMEO, CO. (LAT 39 11 00N LONG 108 16 10W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988				
05...	1400	99	762	14.0
NOV				
09...	0900	133	637	7.0
DEC				
05...	1400	84	728	0.5
FEB 1989				
15...	1300	99	617	0.0
27...	--	68	--	--
MAR				
16...	1130	122	674	4.5
APR				
11...	1400	177	531	5.0
19...	1100	196	363	11.5
MAY 1989				
17...	1300	125	507	14.0
JUN				
01...	0900	124	440	12.0
23...	1100	67	681	15.5
JUL				
25...	1100	36	511	21.0
AUG				
01...	1240	56	810	22.5
14...	1200	61	666	19.5
SEP				
13...	1100	84	594	12.0

09109000 TAYLOR RIVER BELOW TAYLOR PARK RESERVOIR, CO. (LAT 38 49 06N LONG 106 36 31W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988				
05...	[illegible]	143	83	10.0
NOV				
18...	[illegible]	129	86	6.5
DEC				
29...	[illegible]	89	107	3.0
FEB 1989				
16...	1540	97	124	3.7
MAR				
27...	1435	72	117	2.5
APR				
18...	1530	105	118	3.0
MAY 1989				
09...	1445	23	112	3.5
31...	1415	145	68	7.5
JUN				
13...	1335	152	97	8.0
JUL				
12...	1235	205	95	8.0
AUG				
08...	1320	317	92	7.0

09110000 TAYLOR RIVER AT ALMONT, CO. (LAT 38 39 52N LONG 106 [illegible] 41W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988				
04...	1455	210	114	11.0
NOV				
08...	1500	183	117	5.5
DEC				
27...	0935	122	159	0.0
FEB 1989				
15...	1005	106	152	0.0
MAR				
07...	0930	162	147	2.0
30...	1025	173	165	2.0
APR 1989				
19...	0955	166	134	2.5
MAY				
10...	1025	406	[illegible]	[illegible]
31...	1640	405	[illegible]	12.0
JUN				
13...	1535	392	120	12.5
JUL				
12...	1550	330	141	12.5
AUG				
08...	1625	344	132	13.5

09112500 EAST RIVER AT ALMONT CO. (LAT 38 39 52N LONG 106 50 50W)

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT 1988					MAY 1989				
04...	1620	82	290	11.5	10...	1325	1200	175	7.0
NOV					JUN				
08...	1610	75	288	6.0	01...	1035	1250	206	6.5
DEC					14...	1000	927	232	8.0
21...	1105	54	331	0.0	JUL				
FEB 1989					12...	1735	285	309	16.0
15...	1135	57	330	0.5	AUG				
MAR					09...	0940	181	336	12.0
22...	1055	82	310	4.0					
APR									
13...	1155	397	217	4.0					

09114500 GUNNISON RIVER NEAR GUNNISON, CO. (LAT 38 32 31N LONG 106 56 57W)

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT 1988					MAY 1989				
[illegible]	[illegible]	[illegible]	198	11.0	10...	--	1670	164	--
NOV					JUN				
[illegible]	[illegible]	[illegible]	193	4.0	01...	[illegible]	[illegible]	[illegible]	[illegible]
DEC					14...	1230	1400	224	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	JUL				
FEB 1989					11...	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	13...	[illegible]	[illegible]	[illegible]	[illegible]
MAR					AUG				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	09...	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	7.0					
APR									
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					

[illegible] NEAR PARLIN, CO. (LAT [illegible])

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT 1988					APR 1989				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NOV					MAY				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DEC					JUN				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
FEB 1989					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AUG				
MAR					[illegible]	1000	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					

[illegible] CREEK AT GUNNISON, CO. (LAT [illegible])

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT 1988					MAY 1989				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NOV					JUN				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DEC					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	JUL				
MAR 1989					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AUG				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
APR									
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					

[illegible] LAKE FORK AT GATEVIEW, CO. (LAT [illegible])

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT 1988					APR 1989				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	19...	[illegible]	[illegible]	[illegible]	[illegible]
NOV					MAY				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1015	[illegible]	[illegible]	[illegible]
DEC					JUN				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
FEB 1989					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	JUL				
MAR					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AUG				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

09126000 CIMARRON RIVER NEAR CIMARRON, CO. (LAT 38 [illegible] LONG 107 32 39W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
06...	1255	30	117	9.5	11...	1315	117	[illegible]	7.5
NOV					2[illegible]...	[illegible]	346	117	[illegible]
09...	1540	17	121	5.0	JUN				
DEC					[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
22...	1525	3.8	--	[illegible]	[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
FEB 1989					[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
16...	1415	16	[illegible]	0.0	JUL				
MAR					[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
23...	[illegible]	13	[illegible]	[illegible]	AUG				
APR					[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]...	1100	27	[illegible]	[illegible]					

[illegible] GUNNISON RIVER BELOW GUNNISON TUNNEL, CO. (LAT [illegible] LONG [illegible])

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
[illegible]...	[illegible]	339	[illegible]	[illegible]	[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
NOV					[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	JUN				
DEC					[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	JUL				
FEB 1989					[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	AUG				
MAR					[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]					
APR									
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]					

[illegible]

[illegible]

[illegible]

09135900 LEROUX CREEK AT HOTCHKISS, CO. (LAT 38 47 53N LONG 107 43 53W)

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988					MAY 1989				
06...	1600	8.0	1300	14.0	25...	1620	3.0	920	18.0
NOV					JUN				
17...	1535	8.7	1100	8.0	08...	1555	3.1	1740	19.0
DEC					22...	1555	2.9	1530	19.5
15...	1530	8.0	1180	7.5	JUL				
MAR 1989					20...	1540	3.0	525	25.5
02...	1600	7.2	1440	6.5	AUG				
30...	1600	3.4	1300	12.0	17...	1610	5.6	1520	18.0
APR									
27...	1625	2.7	1120	14.5					

09143000 SURFACE CREEK NEAR CEDAREDGE, CO. (LAT 38 59 05N LONG 107 51 13W)

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988					MAY 1989				
07...	0820	12	25	5.0	26...	0835	110	25	4.5
NOV					JUN				
18...	0825	7.5	185	3.0	09...	0830	81	85	7.5
DEC					23...	0905	75	90	8.5
16...	0825	5.7	175	[illegible]	JUL				
MAR 1989					21...	0825	63	145	12.0
31...	0850	9.9	170	[illegible]	AUG				
APR					18...	0825	69	100	12.0
28...	0835	45	115	[illegible]					

09143500 SURFACE CREEK AT CEDAREDGE, CO. (LAT [illegible] LONG [illegible])

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988					MAY 1989				
07...	1020	6.5	[illegible]	[illegible]	26...	[illegible]	[illegible]	95	7.0
NOV					JUN				
18...	1040	3.5	[illegible]	[illegible]	09...	[illegible]	--	95	9.5
DEC					23...	[illegible]	33	130	10.0
16...	[illegible]	[illegible]	[illegible]	[illegible]	JUL				
MAR 1989					21...	[illegible]	17	155	15.0
03...	0825	[illegible]	[illegible]	[illegible]	AUG				
31...	1045	7.5	[illegible]	[illegible]	18...	[illegible]	24	85	14.5
APR									
28...	1035	44	[illegible]	[illegible]					

[illegible] GUNNISON RIVER AT DELTA, CO. (LAT [illegible] LONG [illegible])

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988					MAY 1989				
03...	[illegible]	826	[illegible]	[illegible]	26...	[illegible]	[illegible]	670	[illegible]
DEC					JUN				
[illegible]	[illegible]	540	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	406	[illegible]
FEB 1989					JUL				
17...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAR					AUG				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
APR									
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					

[illegible] UNCOMPAHGRE RIVER NEAR RIDGWAY, CO. (LAT [illegible] LONG [illegible])

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988					MAY 1989				
[illegible]	[illegible]	95	550	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NOV					JUN				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
FEB 1989					JUL				
.....	[illegible]	--	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	1.0	AUG				
APR					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	7.0	SEP				
[illegible]	[illegible]	175	[illegible]	[illegible]	08...	[illegible]	[illegible]	[illegible]	[illegible]

[illegible] DALLAS CREEK NEAR RIDGWAY, CO. (LAT [illegible] LONG [illegible])

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988					MAY 1989				
07...	[illegible]	11	[illegible]	13.0	18...	[illegible]	[illegible]	[illegible]	[illegible]
NOV					JUN				
[illegible]	[illegible]	[illegible]	930	1.0	13...	[illegible]	[illegible]	[illegible]	[illegible]
JAN 1989					JUL				
05...	1510	25	1020	1.0	17...	[illegible]	[illegible]	[illegible]	[illegible]
FEB					AUG				
[illegible]	1320	14	1000	2.5	16...	[illegible]	[illegible]	[illegible]	[illegible]
APR					SEP				
03...	1345	32	560	5.0	26...	[illegible]	[illegible]	[illegible]	[illegible]
13...	1335	13	549	9.5					

09147500 UNCOMPAHGRE RIVER AT COLONA, CO. (LAT 38 19 53N LONG 107 46 44W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
07...	0945	75	694	13.0	12...	0845	229	550	4.5
NOV					30...	1150	305	475	10.5
10...	1230	90	0	9.0	JUN				
DEC					12...	1155	206	556	12.0
21...	0910	86	580	1.5	JUL				
FEB 1989					10...	1350	199	610	16.0
17...	0855	64	739	0.0	AUG				
MAR					07...	1205	169	584	14.0
21...	1600	106	649	11.0	SEP				
APR					13...	1445	33	--	19.0
20...	1645	267	529	9.5					

09149500 UNCOMPAHGRE RIVER AT DELTA, CO. (LAT 38 44 31N LONG 108 04 43W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					APR 1989				
04...	0930	183	1780	11.0	10...	1330	297	910	10.0
NOV					MAY				
07...	1010	127	2170	10.0	26...	0900	142	1830	14.0
DEC					JUN				
21...	1100	138	2900	2.0	20...	0930	131	1590	15.5
FEB 1989					JUL				
16...	1033	[illegible]	2150	0.5	10...	1330	181	1930	22.5
MAR					AUG				
21...	0930	[illegible]	1980	5.0	15...	[illegible]	193	1790	15.5

09151500 ESCALANTE CREEK NEAR DELTA, CO. (LAT 38 [illegible] N LONG 108 [illegible] W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					APR 1989				
05...	1100	[illegible]	[illegible]	[illegible]	[illegible]	1000	[illegible]	190	6.0
NOV					[illegible]	1100	[illegible]	193	10.0
07...	1000	9.2	568	[illegible]	MAY				
DEC					[illegible]	[illegible]	[illegible]	455	17.0
21...	1015	8.8	[illegible]	2.0	JUN				
FEB 1989					[illegible]	1010	3.6	634	25.0
[illegible]	1410	[illegible]	546	0.5	JUL				
MAR					[illegible]	1100	4.8	684	23.0
03...	[illegible]	50	[illegible]	4.0	AUG				
24...	0930	70	[illegible]	[illegible]	15...	[illegible]	6.3	548	22.0

[illegible] REED WASH NEAR MACK, CO. (LAT 39 [illegible] N LONG 108 [illegible] W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	03...	[illegible]	[illegible]	[illegible]	15.0
NOV					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	JUN				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	19...	[illegible]	[illegible]	2040	[illegible]
DEC					JUL				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	17...	1400	[illegible]	[illegible]	[illegible]
FEB 1989					AUG				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAR					SEP				
[illegible]	[illegible]	[illegible]	4490	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
APR									
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					

[illegible] DOLORES RIVER BELOW RICO, CO. (LAT 37 [illegible] N LONG 108 [illegible] W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NOV					JUN				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
JAN 1989					AUG				
[illegible]	[illegible]	[illegible]	703	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
FEB					SEP				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAR									
[illegible]	[illegible]	95	[illegible]	[illegible]					

09166500 DOLORES RIVER AT DOLORES, CO. (LAT 37 [illegible] N LONG [illegible] W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NOV					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	JUN				
JAN 1989					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AUG				
FEB					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	SEP				
MAR					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	--	[illegible]					

09166950 LOST CANYON CREEK NEAR DOLORES, CO. (LAT 37 26 45N LONG 108 28 03W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					APR 1989				
05...	1420	0.12	391	17.0	28...	1400	53	95	6.0
NOV					MAY				
23...	1510	0.61	281	3.0	19...	1350	0.52	354	20.5
JAN 1989					JUN				
06...	1410	1.2	360	0.0	26...	1430	0.08	1600	25.0
FEB					AUG				
28...	1405	3.2	201	0.5	24...	1055	0.05	1050	17.0
MAR									
30...	1430	51	--	5.0					

09172500 SAN MIGUEL RIVER NEAR PLACERVILLE, CO. (LAT 38 02 05N LONG 108 07 15W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
07...	1025	113	396	7.0	12...	1005	351	280	5.0
NOV					JUN				
21...	1405	57	536	0.0	13...	0915	357	252	7.5
JAN 1989					JUL				
05...	0820	80	543	0.0	07...	1045	224	229	13.5
FEB					AUG				
14...	--	553	442	0.0	16...	1230	117	400	17.0
MAR					SEP				
22...	1400	93	432	9.5	06...	0930	97	397	11.0
APR									
19...	1455	297	347	9.0					

09177000 SAN MIGUEL RIVER AT URAVAN, CO. (LAT 38 21 26N LONG 108 42 44W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
07...	0915	142	736	12.0	17...	1445	275	665	15.0
NOV					JUN				
23...	0855	67	1110	0.0	12...	1710	324	571	20.0
JAN 1989					JUL				
04...	1720	68	--	0.0	27...	0805	167	657	21.0
FEB					AUG				
13...	1605	126	868	0.0	16...	2000	80	1040	25.0
MAR					SEP				
16...	1355	374	540	9.0	05...	1245	30	2250	22.0
APR									
19...	1640	522	437	15.0					

09238705 LONG LAKE INLET NEAR BUFFALO PASS, CO. (LAT 40 28 25N LONG 106 41 46W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					JUN 1989				
03...	1445	0.06	--	3.0	27...	1810	2.0	27	6.0
NOV					JUL				
01...	1145	0.10	41	1.0	18...	1130	0.16	18	17.0
JAN 1989					25...	1600	0.95	27	12.0
20...	1015	0.10	49	0.0	AUG				
MAY					01...	1130	0.12	36	13.0
30...	1655	14	14	0.5					

09238710 FISH CREEK TRIBUTARY BELOW LONG LAKE, NEAR BUFFALO PASS, CO. (LAT 40 28 36N LONG 106 41 13W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
MAY 1989					JUL 1989				
30...	1620	14	19	1.0	18...	1200	0.18	26	21.0
JUN					25...	1620	0.03	19	18.5
27...	1730	3.5	46	9.5	AUG				
					01...	1145	0.01	19	14.0

09238750 MIDDLE FORK FISH CREEK NEAR BUFFALO PASS, CO. (LAT 40 29 54N LONG 106 41 30W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					JUN 1989				
03...	1136	0.18	36	4.5	28...	1045	3.3	20	6.5
NOV					JUL				
01...	1015	0.20	36	1.5	18...	1030	0.47	18	12.0
JAN 1989					25...	2000	7.2	23	10.0
20...	1245	0.20	44	0.0	AUG				
MAY					01...	0930	0.50	23	12.5
30...	1730	44	12	0.5					

09238770 GRANITE CREEK NEAR BUFFALO PASS, CO. (LAT 40 29 35N LONG 106 41 31W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					JUN 1989				
03...	1245	0.47	37	5.0	23...	1000	10	22	6.5
NOV					JUL				
01...	1110	0.30	35	3.5	13...	1100	1.6	[illegible]	17.5
JAN 1989					26...	0840	3.7	[illegible]	9.0
20...	1130	0.50	47	0.0	AUG				
MAY					01...	1030	1.3	29	14.0
30...	1525	71	13	1.0	29...	1040	0.84	39	12.0

09238800 MIDDLE FORK FISH CREEK TRIBUTARY BELOW FISH CREEK RESERVOIR, CO (LAT 40 29 50N LONG 106 41 54W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
MAY 1989					JUL 1989				
30...	1520	101	17	1.0	13...	1250	0.02	30	20.0
JUN					25...	1930	0.02	15	14.5
28...	0820	9.8	32	7.0	AUG				
					01...	1050	0.26	18	20.0

09239500 YAMPA RIVER AT STEAMBOAT SPRINGS, CO. (LAT 40 29 01N LONG 106 49 54W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
04...	1130	162	288	10.0	11...	0745	1430	150	9.0
25...	1112	69	294	7.5	18...	1105	866	64	[illegible]
DEC					JUN				
12...	1112	111	301	2.0	23...	1220	337	79	[illegible]
JAN 1989					27...	[illegible]	219	112	19.0
25...	1055	57	265	0.5	AUG				
FEB					01...	1435	91	[illegible]	[illegible]
24...	1112	63	289	--	29...	1505	64	[illegible]	[illegible]
MAR									
13...	1205	95	226	5.0					
23...	0935	111	276	4.0					

09240900 ELK RIVER ABOVE CLARK, CO (LAT 40 44 38N LONG [illegible] 13W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
04...	0900	62	85	3.0	09...	1055	624	54	10.0
NOV					18...	1220	425	53	10.0
08...	1055	43	117	3.0	23...	1250	828	38	[illegible]
DEC					JUN				
12...	1030	34	98	0.5	06...	1145	[illegible]	42	8.0
JAN 1989					JUL				
04...	1015	37	106	0.0	19...	[illegible]	127	72	[illegible]
FEB					AUG				
13...	1030	32	96	0.5	14...	[illegible]	[illegible]	[illegible]	[illegible]
MAR					SEP				
14...	1100	39	97	[illegible]	07...	[illegible]	[illegible]	[illegible]	[illegible]
APR									
25...	1100	455	52	4.0					

09241000 ELK RIVER AT CLARK, CO. (LAT 40 43 [illegible] LONG [illegible])

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
04...	1095	42	92	9.5	09...	[illegible]	[illegible]	[illegible]	[illegible]
NOV					23...	[illegible]	868	42	11.0
08...	1210	40	107	3.0	JUN				
DEC					06...	1340	739	54	9.0
12...	1210	54	113	0.5	JUL				
JAN 1989					13...	[illegible]	[illegible]	70	[illegible]
04...	1145	67	99	0.5	AUG				
FEB					14...	[illegible]	[illegible]	75	14.0
13...	1215	50	105	0.5	SEP				
MAR					07...	[illegible]	72	83	10.5
14...	1235	1.2	67	5.0					
APR									
21...	1255	750	60	8.5					

[illegible] ELKHEAD CREEK NEAR ELKHEAD, CO. (LAT 40 40 [illegible])

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
26...	1035	3.2	273	4.0	18...	[illegible]	[illegible]	[illegible]	[illegible]
JAN 1989					JUL				
05...	1100	5.5	275	0.5	06...	[illegible]	[illegible]	[illegible]	[illegible]
FEB					AUG				
16...	1100	4.5	270	0.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
APR					SEP				
17...	1250	201	120	10.0	07...	[illegible]	[illegible]	[illegible]	15.5
27...	0920	166	156	5.0					

09247600 YAMPA RIVER BELOW CRAIG, CO. (LAT 40 28 51N LONG 107 36 49W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 14...	0900	138	411	10.0	MAY 1989 02...	1310	1580	223	10.5
NOV 11...	0940	183	579	3.0	22...	1035	3030	128	12.0
DEC 19...	1240	200	643	0.5	JUL 11...	1100	198	232	22.5
FEB 1989 21...	1300	112	209	0.5	AUG 23...	1000	138	361	18.5
APR 07...	1500	1940	451	7.0	SEP 14...	1030	163	396	15.5

09250507 WILSON CREEK ABOVE TAYLOR CREEK NEAR AXIAL, CO. (LAT 40 18 53N LONG 107 47 58

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 04...	1525	0.75	--	14.0	APR 1989 25...	1110	1.6	1360	13.0
NOV 07...	1429	1.0	1590	8.0	MAY 24...	1354	0.25	1960	21.5
DEC 14...	1225	1.0	1610	0.0	JUN 29...	1407	0.16	2240	26.0
FEB 1989 03...	1310	0.30	196	0.0	JUL 18...	1146	0.10	2250	28.5
MAR 10...	1540	2.5	986	6.5	SEP 19...	1145	0.49	1700	16.0

09250510 TAYLOR CREEK AT MOUTH NEAR AXIAL, CO. (LAT 40 18 48N LONG 107 47 57W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 04...	1416	0.10	1960	14.5	MAR 1989 10...	1630	0.13	1090	5.0
NOV 07...	1415	0.01	2030	5.0					

09253000 LITTLE SNAKE RIVER NEAR SLATER, CO. (LAT 40 59 58N LONG 107 08 34W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 05...	1100	20	--	13.0	MAY 1989 09...	2150	1040	136	9.0
NOV 09...	1015	22	235	1.0	JUN 22...	1103	147	81	10.0
DEC 12...	1200	29	173	0.0	JUL 24...	1215	74	93	19.5
FEB 1989 24...	1322	37	136	0.5	AUG 17...	1040	21	162	17.0
MAR 30...	1125	70	172	4.0	SEP 20...	1405	23	176	14.5
APR 26...	1510	746	102	6.0					

09255000 SLATER FORK NEAR SLATER, CO. (LAT 40 58 54N LONG 107 23 58W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 05...	1310	12	--	14.5	MAY 1989 10...	0935	57	168	9.0
NOV 09...	1220	19	274	2.5	JUN 22...	1403	25	231	15.5
DEC 12...	1355	17	226	0.0	JUL 24...	1517	6.2	316	26.0
FEB 1989 24...	1020	19	222	0.5	AUG 17...	1330	5.9	269	23.5
MAR 30...	1405	38	226	6.0	SEP 20...	1305	5.3	266	16.5
APR 26...	1140	258	164	7.5					

09258000 WILLOW CREEK NEAR DIXON, WY. (LAT 40 54 56N LONG 107 31 16W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 06...	1130	2.1	153	13.0	MAY 1989 23...	1110	17	78	11.5
NOV 09...	1351	2.1	260	3.5	JUN 22...	1512	4.1	109	17.0
DEC 20...	1130	2.4	185	0.5	JUL 24...	1552	3.1	145	24.5
MAR 1989 03...	1205	2.8	286	0.5	SEP 01...	1153	1.1	129	15.5
APR 07...	1055	12	295	5.5					

09260050 YAMPA RIVER AT DEERLODGE PARK, CO. (LAT 40 27 02N LONG 108 31 20W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988				
11...	1300	286	633	10.0
NOV				
08...	1014	289	978	3.5
DEC				
08...	1110	182	751	0.5
MAR 1989				
24...	1235	1610	856	5.0
APR				
21...	1220	4840	196	11.5
28...	1100	5610	189	9.5
MAY 1989				
26...	1145	5160	196	14.5
JUN				
16...	1140	2490	203	17.0
JUL				
19...	1048	161	649	20.5
20...	1006	127	653	23.5
AUG				
15...	1403	178	652	20.5
SEP				
06...	1045	37	721	19.5

09302450 LOST CREEK NEAR BUFORD, CO. (LAT 40 03 31N LONG 107 29 06W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988				
03...	1200	2.0	392	9.0
NOV				
02...	1558	4.3	374	3.0
DEC				
08...	1049	2.0	413	1.0
JAN 1989				
30...	1520	2.1	366	5.0
FEB				
21...	1045	2.4	359	0.0
MAR				
15...	0945	[illegible]	393	3.0
APR 1989				
17...	1023	73	233	[illegible]
25...	[illegible]	131	163	[illegible]
MAY				
[illegible]	1440	67	[illegible]	[illegible]
[illegible]	[illegible]	153	[illegible]	[illegible]
JUN				
[illegible]	[illegible]	[illegible]	262	18.0
JUL				
[illegible]	[illegible]	[illegible]	[illegible]	18.0
AUG				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible] WHITE RIVER NEAR MEEKER, CO. (LAT [illegible] LONG [illegible])

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988				
27...	1425	[illegible]	[illegible]	[illegible]
DEC				
[illegible]	[illegible]	[illegible]	--	[illegible]
JAN 1989				
[illegible]	1415	[illegible]	[illegible]	[illegible]
FEB				
03...	0950	[illegible]	[illegible]	[illegible]
28...	[illegible]	[illegible]	[illegible]	[illegible]
APR				
03...	[illegible]	[illegible]	--	[illegible]
MAY 1989				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
JUN				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
JUL				
[illegible]	[illegible]	[illegible]	[illegible]	20.0
AUG				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SEP				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

09306222 PICEANCE CREEK AT WHITE RIVER, CO. (LAT [illegible] LONG [illegible])

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
DEC 1988				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
JAN 1989				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAR				
[illegible]	[illegible]	[illegible]	--	[illegible]
APR				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAY				
[illegible]	[illegible]	[illegible]	[illegible]	15.0
JUN 1989				
[illegible]	[illegible]	[illegible]	[illegible]	--
JUL				
[illegible]	[illegible]	[illegible]	[illegible]	--
AUG				
[illegible]	[illegible]	[illegible]	[illegible]	--
SEP				
[illegible]	[illegible]	[illegible]	[illegible]	--

[illegible] SAN JUAN RIVER AT PAGOSA SPRINGS, CO. (LAT [illegible] LONG [illegible])

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NOV				
[illegible]	[illegible]	[illegible]	--	[illegible]
DEC				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
JAN 1989				
[illegible]	[illegible]	[illegible]	--	[illegible]
FEB				
17...	[illegible]	[illegible]	[illegible]	[illegible]
MAR				
[illegible]	1250	[illegible]	[illegible]	[illegible]
APR 1989				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAY				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
JUN				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AUG				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SEP				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

09346000 NAVAJO RIVER AT EDITH, CO. (LAT 37 00 10N LONG 106 54 25W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					APR 1989				
03...	1305	47	260	14.0	27...	1340	61	200	10.0
NOV					JUN				
21...	1425	59	--	3.0	29...	1400	59	293	19.5
JAN 1989					AUG				
10...	1250	31	--	0.0	15...	1420	62	245	22.0
FEB					SEP				
17...	1150	33	246	0.0	06...	1420	54	264	20.5
MAR									
[illegible]...	1140	238	232	8.0					

09346400 SAN JUAN RIVER NEAR CARRACAS, CO. (LAT 37 00 49N LONG 107 18 42W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
[illegible]...	1545	178	380	17.5	25...	1105	1780	206	11.0
NOV					JUN				
[illegible]...	1040	111	461	0.0	29...	1150	317	213	20.0
MAR 1989					AUG				
[illegible]...	1442	1087	411	6.0	15...	1340	194	283	24.0
APR					SEP				
[illegible]...	1157	1390	123	8.[illegible]	18...	1030	[illegible]	271	14.0

09349800 PIEDRA RIVER NEAR ARBOLES, CO. (LAT 37 05 18N LONG 107 [illegible]W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
[illegible]...	[illegible]	[illegible]	--	10.[illegible]	[illegible]...	1245	[illegible]	147	[illegible]
NOV					[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]...	[illegible]	[illegible]	[illegible]	1.0	JUN				
DEC					[illegible]...	[illegible]	194	[illegible]	16.5
27...	[illegible]	[illegible]	433	[illegible]	AUG				
JAN 1989					[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	SEP				
FEB					[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
17...	[illegible]	75	412	[illegible]					
APR									
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]					

[illegible] ANIMAS RIVER AT DURANGO, CO. (LAT 37 16 [illegible]W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
[illegible]...	1545	[illegible]	753	[illegible]	[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
NOV					JUN				
[illegible]...	[illegible]	193	[illegible]	[illegible]	[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
JAN 1989					JUL				
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
FEB					AUG				
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
MAR					SEP				
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
APR									
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]					

[illegible] NAVAJO WASH NEAR TOWAOC, CO. (LAT [illegible]W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					AUG 1989				
05...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]
APR 1989					[illegible]...	[illegible]	[illegible]	--	--
10...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]...	[illegible]	[illegible]	--	--
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]...	[illegible]	[illegible]	--	--
MAY					[illegible]...	[illegible]	--	--	--
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]

395450108301502 CA RETORT WELL RAM-2B

LOCATION.--Lat 39°54'50", long 108°30'15", in NW¼SW¼SE¼ sec. 33, T.1 S, R.99 W., Rio Blanco County, Hydrologic Unit 14050006.

AQUIFER.--Green River.

WELL CHARACTERISTICS.--Observation well, diameter 2 in.

PERIOD OF RECORD.--September 1989.

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
SEP 1989									
12...	1115	2580	7.3	14.0	0	1300	160	210	200

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	ALKA-LINITY WAT.DIS GRAN T. FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
SEP 1989									
12...	[illegible]	[illegible]	515	509	1200	[illegible]	7.9	[illegible]	[illegible]

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)
SEP 1989								
12...	[illegible]	[illegible]	<0.01	[illegible]	[illegible]	[illegible]	<0.01	<0.01

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
SEP 1989										
12...	1115	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)
SEP 1989									
12...	[illegible]	[illegible]	<0.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

TOTAL RECOVERABLE CONCENTRATIONS OF SEMI-VOLATILE ORGANIC COMPOUNDS

DATE	TIME	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)	BENZO GHI PERYL ENE1,12-BENZOPERYLENE TOTAL (UG/L)	BENZO A-PYRENE TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLORO-ETHYL) ETHER TOTAL (UG/L)
SEP 1989											
12...	1115	<5	<5	<5	<5	<10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

RIO BLANCO COUNTY

395450108301502 CA RETORT WELL RAM-2B--Continued

TOTAL RECOVERABLE CONCENTRATIONS OF SEMI-VOLATILE ORGANIC COMPOUNDS

DATE	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	1,2,5,6 -DIBENZ -ANTHRA -CENE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)
SEP 1989											
12...	<5	15	<5	<5	<30	<5	<5	<5	<10	<10	<5

DATE	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO -ORTHO-CRESOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)
SEP 1989											
12...	<5	<5	<5	<5	<5	<5	<5	<20	<30	<5	<5

DATE	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)
SEP 1989											
12...	<10	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5

DATE	2-NITRO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	N-NITRO -SODI-METHY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO -SODI-PHENY-LAMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)
SEP 1989											
12...	<5	<30	<5	<5	<5	<30	<5	<5	<5	<5	<20

TOTAL RECOVERABLE CONCENTRATIONS OF INDUSTRIAL PURGEABLE ORGANIC COMPOUNDS

DATE	TIME	BENZENE TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)
SEP 1989												
12...	111[illegible]	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3

DATE	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPENE TOTAL (UG/L)
SEP 1989												
12...	<5	<5	<5	<3	<3	<3	<3	<3	<3	<3	<5	<3

DATE	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)
SEP 1989												
12...	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3

395452108301502 CA RETORT WELL RAM-5A

LOCATION.--Lat 39°54'52", long 108°30'15", in NW¼SW¼SE¼ sec. 33, T.1 S., R.99 W., Rio Blanco County, Hydrologic Unit 14050006.

AQUIFER.--Green River.

WELL CHARACTERISTICS.--Observation well, diameter 2 in.

PERIOD OF RECORD.--September 1989.

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
SEP 1989									
13...	0820	1730	7.4	13.5	[illegible]	770	130	94	150

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	ALKA-LINITY WAT.DIS GRAN T. FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
SEP 1989									
13...	3	4.7	--	370	690	16	.7	17	1520

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)
SEP 1989								
13...	[illegible]	[illegible]	<0.01	<0.1	[illegible]	[illegible]	<0.01	[illegible]

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
SEP 1989										
13...	0820	[illegible]	<1	[illegible]	<1	[illegible]	<3	[illegible]	[illegible]	<1

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)
SEP 1989									
13...	90	[illegible]	<0.1	[illegible]	1	<1	<1.0	[illegible]	[illegible]

TOTAL RECOVERABLE CONCENTRATIONS OF SEMI-VOLATILE ORGANIC COMPOUNDS

DATE	TIME	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)	BENZO GH I PERYL ENE1,12-BENZOP ERYLENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BIS 2-CHLORO-ETHOXY METHANE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)
SEP 1989											
13...	0820	<5	<5	<5	<5	<10	<10	<10	<10	[illegible]	[illegible]

395452108301502 CA RETORT WELL RAM-5A--Continued

TOTAL RECOVERABLE CONCENTRATIONS OF SEMI-VOLATILE ORGANIC COMPOUNDS

DATE	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	1,2,5,6-DIBENZ-ANTHRA-CENE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)
SEP 1989 13...	<5	<5	<5	<5	<30	<5	<5	<5	<10	<10	<5

DATE	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)
SEP 1989 13...	<5	<5	<5	<5	<5	<5	<5	<20	<30	<5	<5

DATE	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)
SEP 1989 13...	<10	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5

DATE	2-NITRO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	N-NITRO-SODI-METHYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENYL-AMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOLS C-6-H-5-OH TOTAL (UG/L)	PYRENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)
SEP 1989 13...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

TOTAL RECOVERABLE CONCENTRATIONS OF INDUSTRIAL PURGEABLE ORGANIC COMPOUNDS

DATE	TIME	BENZENE TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	1,2-DIBROMO-ETHANE WATER WHOLE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)
SEP 1989 13...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DATE	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,2-TRANSDI-CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)
SEP 1989 13...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DATE	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	1,1,2,2-TETRA-CHLORO-ETHANE TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)
SEP 1989 13...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

RIO BLANCO COUNTY

395452108301401 CA RETORT WELL RAM-6A

LOCATION.--Lat 39°54'52", long 108°30'14", in NW¼SW¼SE¼ sec. 33, T.1 S, R.99 W., Rio Blanco County, Hydrologic Unit 14050006.

AQUIFER.--Green River.

WELL CHARACTERISTICS.--Observation well, diameter 2 in.

PERIOD OF RECORD.--September 1989.

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
SEP 1989									
13...	1000	1710	7.3	13.5	0	710	120	98	[illegible]

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	ALKA-LINITY WAT.DIS GRAN T. FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
SEP 1989									
13...	[illegible]	9.[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
SEP 1989								
13...	[illegible]	[illegible]	<[illegible]	<[illegible]	[illegible]	[illegible]	[illegible]	<[illegible]

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
SEP 1989										
13...	[illegible]	[illegible]	[illegible]	[illegible]	<[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)
SEP 1989									
13...	[illegible]	[illegible]	<0.[illegible]	[illegible]	<[illegible]	<[illegible]	<[illegible]	[illegible]	[illegible]

TOTAL RECOVERABLE CONCENTRATIONS OF SEMI-VOLATILE ORGANIC COMPOUNDS

DATE	TIME	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZO A ANTHRACENE 1,2-BENZANTHRACENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)	[illegible] TOTAL	[illegible]	[illegible]	[illegible]
SEP 1989											
13...	[illegible]	<5	<5	<5	<5	<[illegible]	<[illegible]	<[illegible]	<[illegible]	[illegible]	[illegible]

RIO BLANCO COUNTY

395452108301401 CA RETORT WELL RAM-6A--Continued

TOTAL RECOVERABLE CONCENTRATIONS OF SEMI-VOLATILE ORGANIC COMPOUNDS

DATE	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	1,2,5,6-DIBENZ-ANTHRA-CENE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)
SEP 1989 13...	<5	<5	<5	<5	<30	<5	<5	<5	<10	<10	<5

DATE	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)
SEP 1989 13...	<5	<5	<5	<5	<5	<5	<5	<20	<30	<5	<5

DATE	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)
SEP 1989 13...	<10	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5

DATE	2-NITRO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)
SEP 1989 13...	<5	<30	<5	<5	<5	<30	<5	<5	<5	<5	<20

TOTAL RECOVERABLE CONCENTRATIONS OF INDUSTRIAL PURGEABLE ORGANIC COMPOUNDS

DATE	TIME	BENZENE TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)
SEP 1989 13...	1000	10	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3

DATE	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,2-TRANSDI-CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPENE TOTAL (UG/L)
SEP 1989 13...	<3	<5	<5	<3	<3	<3	<3	<3	<3	<3	<3	<3

DATE	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	1,1,2,2-TETRA-CHLORO-ETHANE TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)
SEP 1989 13...	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3

395451108301501 CA RETORT WELL RAM-7A

LOCATION.--Lat 39°54'51", long 108°30'15", in NW¼SW¼SE¼ sec. 33, T.1 S, R.99 W., Rio Blanco County, Hydrologic Unit 14050006.

AQUIFER.--Green River.

WELL CHARACTERISTICS.--Observation well, diameter 2 in., depth 500 ft., screened 4[illegible] to 4[illegible] ft.

PERIOD OF RECORD.--October 1984 to September 1989, (discontinued).

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT 1984									
2[illegible]...	[illegible]930	11990	11.[illegible]	--	--	[illegible]	[illegible]	[illegible]	[illegible]
MAY 1985									
13...	1230	[illegible]	12.4	--	--	--	[illegible]	[illegible]	[illegible]
SEP									
04...	1430	[illegible]	[illegible]	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]
MAY 1986									
30...	[illegible]	[illegible]	[illegible]	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]
AUG									
1[illegible]...	[illegible]	[illegible]	7.[illegible]	[illegible]	--	--	[illegible]	[illegible]	[illegible]
SEP 1989									
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	ALKA-LINITY WAT.DIS [illegible]	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT 1984									
[illegible]...	[illegible]	[illegible]	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAY 1985									
[illegible]...	--	[illegible]	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SEP									
[illegible]...	[illegible]	[illegible]	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]	--
MAY 1986									
[illegible]...	--	[illegible]	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AUG									
[illegible]...	[illegible]	[illegible]	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]	--
SEP 1989									
[illegible]...	[illegible]	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)
OCT 1984								
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAY 1985								
[illegible]...	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SEP								
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAY 1986								
[illegible]...	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AUG								
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SEP 1989								
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

395451108301501 CA RETORT WELL RAM-7A--Continued

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT 1984										
[illegible]...	[illegible]	<1	<100	190	[illegible]	[illegible]	[illegible]	<1	[illegible]	[illegible]
MAY 1985										
13...	[illegible]	<1	[illegible]	140	<1	[illegible]	[illegible]	<1	[illegible]	[illegible]
SEP										
04...	1400	<1	[illegible]	[illegible]	<1	[illegible]	<1	[illegible]	[illegible]	[illegible]
MAY 1986										
[illegible]...	[illegible]	<1	--	[illegible]	<1	[illegible]	<1	[illegible]	[illegible]	[illegible]
AUG										
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	<1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SEP 1989										
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	<1	[illegible]	<1	<1	[illegible]	[illegible]

DATE	LITHIUM DIS-SOLVED	MANGA-NESE, DIS-SOLVED	MERCURY DIS-SOLVED	MOLYB-DENUM, DIS-SOLVED	NICKEL, DIS-SOLVED	SELE-NIUM, DIS-SOLVED	SILVER, DIS-SOLVED	STRON-TIUM, DIS-SOLVED	ZINC, DIS-SOLVED
OCT 1984									
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAY 1985									
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SEP									
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAY 1986									
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AUG									
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SEP 1989									
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

DATE	TIME	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OCT 1984											
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAY 1985											
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SEP											
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAY 1986											
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AUG											
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SEP 1989											
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DATE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OCT 1984											
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAY 1985											
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SEP											
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAY 1986											
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AUG											
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SEP 1989											
[illegible]...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

395451108301501 CA RETORT WELL RAM-7A--Continued

TOTAL RECOVERABLE CONCENTRATIONS OF SEMI-VOLATILE ORGANIC COMPOUNDS

DATE	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)
OCT 1984 25...	<5	<5	<5	<5	<5	<5	<5	<20	<30	<5	<5
MAY 1985 13...	<5	<5	<5	<5	<1	<5	<5	<20	<30	<5	<5
SEP 04...	<5	<5	<5	<5	<5	<5	<5	<20	<30	<5	<5
MAY 1986 30...	<3	<3	<6	<5	<6	<5	<5	<20	<30	<5	<5
AUG 14...	<3	<3	<6	<5	<6	<5	<5	<20	<30	<5	<5
SEP 1989 1[illegible]...	<5	<5	<5	<5	16	<5	<5	<20	<30	<5	<5

DATE	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)
OCT 1984 25...	<10	<5	<5	<5	<5	<5	<5	<10	<5	[illegible]	<5
MAY 1985 13...	<10	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5
SEP 04...	<10	<5	<5	<5	<5	<5	<5	<10	<5	[illegible]	<5
MAY 1986 30...	<10	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5
AUG 14...	<10	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5
SEP 1989 1[illegible]...	<10	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5

DATE	2-NITRO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)
OCT 1984 25...	<5	<30	<5	<5	<5	<30	<5	[illegible]	<5	<5	[illegible]
MAY 1985 13...	<5	<30	<5	<5	<5	<30	<5	<5	<5	<5	<5
SEP 04...	<5	<30	<5	<5	<5	<30	<5	<5	<5	<5	<5
MAY 1986 30...	<5	<30	<5	<5	<5	<30	<5	<5	<5	<5	<5
AUG 14...	<5	<30	<5	<5	<5	<30	<5	<5	<5	<5	<5
SEP 1989 1[illegible]...	<5	<30	<5	<5	<5	<30	<5	<5	<5	<5	<5

TOTAL RECOVERABLE CONCENTRATIONS OF INDUSTRIAL PURGEABLE ORGANIC COMPOUNDS

DATE	TIME	BENZENE TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	1,2-DIBROM-ETHANE WATER WHOLE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)
OCT 1984 25...	[illegible]	--	--	--	--	--	--	--	--	--	--	--
MAY 1985 13...	[illegible]	--	--	--	--	--	--	--	--	--	--	--
SEP 04...	[illegible]	<3	<3	<3	<3	<3	<3	<3	--	<3	--	<3
MAY 1986 30...	[illegible]	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
AUG 14...	[illegible]	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
SEP 1989 1[illegible]...	[illegible]	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3

395451108301501 CA RETORT WELL RAM-7A--Continued

TOTAL RECOVERABLE CONCENTRATIONS OF INDUSTRIAL PURGEABLE ORGANIC COMPOUNDS

DATE	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPENE TOTAL (UG/L)
OCT 1984												
25...	<1	<5	<5	--	--	--	--	--	--	--	3	--
MAY 1985												
13...	<5	<5	<5	--	--	--	--	--	--	--	<5	--
SEP												
04...	<5	<5	<5	<3	<3	<3	<3	<3	<3	--	1	<3
MAY 1986												
30...	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<5	<3
AUG												
14...	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<5	<3
SEP 1989												
12...	<5	<5	<5	<3	<3	<3	<3	<3	<3	<3	<5	<3

DATE	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)
OCT 1984												
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 1985												
13...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
04...	<3	<3	<3	--	<3	<3	<3	<3	<3	<3	<3	--
MAY 1986												
30...	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
AUG												
14...	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
SEP 1989												
12...	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<1	<3

395451108301502 CA RETORT WELL RAM-7B

LOCATION.--Lat 39°54'51", long 108°30'15", in NW¼SW¼SE¼ sec. 33, T.1 S, R.99 W., Rio Blanco County, Hydrologic Unit 14050006.

AQUIFER.--Green River.

WELL CHARACTERISTICS.--Observation well, diameter 2 in., depth 575 ft., screened 545 to 565 ft.

PERIOD OF RECORD.--October 1984 to September 1989, (discontinued).

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT 1984									
25...	0940	6950	10.5	--	--	640	250	0.1	760
MAY 1985									
13...	1340	6620	11.3	--	--	--	350	<0.1	650
SEP									
04...	1430	2710	9.9	23.5	--	540	180	21	230
MAY 1986									
30...	1340	3060	10.2	25.0	--	880	350	0.4	230
AUG									
14...	1340	1640	8.9	20.5	--	420	120	28	180
SEP 1989									
12...	1430	2240	11.0	18.0	0	460	180	0.1	200

395451108301502 CA RETORT WELL RAM-7B--Continued

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	ALKA-LINITY WAT.DIS GRAN T. FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT 1984									
25...	14	870	133	--	3500	43	2.1	17	5540
MAY 1985									
13...	--	890	160	--	3100	37	1.8	15	--
SEP									
04...	5	190	22	--	1300	22	3.8	13	1980
MAY 1986									
30...	4	230	34	--	1600	18	2.8	15	2480
AUG									
14...	4	110	41	--	830	16	2.6	20	1340
SEP 1989									
12...	4	170	--	72	1100	24	3.3	19	1740

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
OCT 1984								
25...	7.52	0.0	0.02	<0.1	5.30	6.5	0.01	0.02
MAY 1985								
13...	--	--	<0.01	<0.1	5.70	5.4	0.01	<0.01
SEP								
04...	2.69	0.0	<0.01	<0.1	1.70	2.6	<0.01	<0.01
MAY 1986								
30...	3.36	0.0	<0.01	<0.1	1.60	1.2	0.02	<0.01
AUG								
14...	1.81	0.0	<0.01	<0.1	0.42	0.60	0.01	<0.01
SEP 1989								
12...	2.35	0.0	<0.01	<0.1	1.10	1.6	<0.01	<0.01

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT 1984										
25...	0940	<1	<100	2100	1	10	2	<1	70	<1
MAY 1985										
13...	1340	1	400	1800	1	20	<1	<1	40	4
SEP										
04...	1430	3	<100	960	<1	<10	1	1	80	1
MAY 1986										
30...	1340	21	--	1200	<1	10	<1	<1	50	<1
AUG										
14...	1340	12	34	640	<1	<10	<1	3	32	<5
SEP 1989										
12...	1430	9	<100	1100	<1	1	1	1	30	<1

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT 1984									
25...	1200	<10	<0.1	420	15	<1	<1.0	11000	10
MAY 1985									
13...	1300	10	<0.1	460	12	<1	<1.0	8000	20
SEP									
04...	390	50	<0.1	37	6	<1	<1.0	4800	50
MAY 1986									
30...	400	10	<0.1	220	3	<1	<1.0	5800	10
AUG									
14...	180	26	0.1	160	4	<1	<1.0	3800	5
SEP 1989									
12...	220	<10	<0.1	10	<1	<1	<1.0	4700	<10

RIO BLANCO COUNTY

395451108301502 CA RETORT WELL RAM-7B--Continued

TOTAL RECOVERABLE CONCENTRATIONS OF SEMI-VOLATILE ORGANIC COMPOUNDS

DATE	TIME	ACENAPHTHENE TOTAL (UG/L)	ACENAPHTHYLENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZO A ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)	BENZOGHI PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)
OCT 1984 25...	0940	<5	<5	<5	<5	<10	<10	<10	<10	<5	<5
MAY 1985 13...	1340	<5	<5	<5	<5	<10	<10	<10	<10	<5	<5
SEP 04...	1430	<5	<5	<5	<5	<10	<10	<10	<10	<5	<5
MAY 1986 30...	1340	<5	<5	<5	<10	<10	<10	<10	<10	<5	<5
AUG 14...	1340	<5	<5	<5	<10	<10	<10	<10	<10	<5	<5
SEP 1989 12...	1430	<5	<5	<5	<5	<10	<10	<10	<10	<5	<5

DATE	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	BIS(2-ETHYLHEXYL) PHTHALATE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	PARACHLOROMETA CRESOL TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	1,2,5,6-DIBENZ-ANTHRA-CENE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)
OCT 1984 25...	<5	<5	<5	<5	<30	<5	<5	<5	<10	<10	2
MAY 1985 13...	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5
SEP 04...	<5	<11	<5	<5	<30	<5	<5	<5	<10	<10	<5
MAY 1986 30...	<5	<5	<5	<5	<5	<5	<6	<5	<10	<10	<3
AUG 14...	<5	<5	<5	<5	<5	<5	<6	<5	<10	<10	<3
SEP 1989 12...	<5	<5	<5	<5	<30	<5	<5	<5	<10	<10	<5

DATE	1,3-DICHLOROBENZENE TOTAL (UG/L)	1,4-DICHLOROBENZENE TOTAL (UG/L)	2,4-DICHLOROPHENOL TOTAL (UG/L)	DIETHYL PHTHALATE TOTAL (UG/L)	2,4-DIMETHYLPHENOL TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	2,4,-DINITROPHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHOCRESOL TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)
OCT 1984 25...	<5	<5	<5	<5	8	<5	<5	<20	<30	<5	<5
MAY 1985 13...	<5	<5	<5	<5	6	<5	<5	<20	<30	<5	<5
SEP 04...	<5	<5	<5	<5	<5	<5	<5	<20	<30	<5	<5
MAY 1986 30...	<3	<3	<6	<5	9	<5	<5	<20	<30	<5	<5
AUG 14...	<3	<3	<6	<5	<6	<5	<5	<20	<30	<5	<5
SEP 1989 12...	<5	<5	<5	<5	18	<5	<5	<20	<30	<5	<5

DATE	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)	FLUORENE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)
OCT 1984 25...	<10	<5	<5	<5	<5	<5	<5	<10	<5	<1	<5
MAY 1985 13...	<10	<5	<5	<5	<5	<5	<5	<10	<5	<1	<5
SEP 04...	<10	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5
MAY 1986 30...	<10	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5
AUG 14...	<10	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5
SEP 1989 12...	<10	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5

395451108301502 CA RETORT WELL RAM-7B--Continued

TOTAL RECOVERABLE CONCENTRATIONS OF SEMI-VOLATILE ORGANIC COMPOUNDS

DATE	2-NITROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	PENTACHLOROPHENOL TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	1,2,4-TRICHLOROBENZENE TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)
OCT 1984											
25...	<5	<30	<5	<5	<5	<30	<5	4	<5	<5	<20
MAY 1985											
13...	<5	<30	<5	<5	<5	<30	<5	<5	<5	<5	<20
SEP											
04...	<5	<30	<5	<5	<5	<30	<5	<5	<5	<5	<20
MAY 1986											
30...	<6	<30	<5	<5	<5	<30	<5	<6	<5	<5	<5
AUG											
14...	<6	<30	<5	<5	<5	<30	<5	<6	<5	<5	<5
SEP 1989											
12...	<5	<30	<5	<5	<5	<30	<5	<5	<5	<5	<20

TOTAL RECOVERABLE CONCENTRATIONS OF INDUSTRIAL PURGEABLE ORGANIC COMPOUNDS

DATE	TIME	BENZENE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CARBONTETRACHLORIDE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	METHYLCHLORIDE TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	1,2-DIBROMOETHANE WATER WHOLE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)
OCT 1984												
25...	0940	--	--	--	--	--	--	--	--	--	--	--
MAY 1985												
13...	1340	--	--	--	--	--	--	--	--	--	--	--
SEP												
04...	1430	15	<3	<3	<3	<3	<3	<3	--	<3	--	<3
MAY 1986												
30...	1340	11	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
AUG												
14...	1340	7.2	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
SEP 1989												
12...	1430	10	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3

DATE	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)	1,4-DICHLOROBENZENE TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,2-TRANSDICHLOROETHENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	1,3-DICHLOROPROPENE TOTAL (UG/L)
OCT 1984												
25...	2	<5	<5	--	--	--	--	--	--	--	<1	--
MAY 1985												
13...	<5	<5	<5	--	--	--	--	--	--	--	<1	--
SEP												
04...	<5	<5	<5	<3	<3	<3	<3	<3	<3	--	<5	<3
MAY 1986												
30...	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<5	<3
AUG												
14...	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<5	<3
SEP 1989												
12...	<5	<5	<5	<3	<3	<3	<3	<3	<3	<3	<5	<3

DATE	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	TETRACHLOROETHYLENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	VINYL CHLORIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)
OCT 1984												
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 1985												
13...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
04...	<3	<3	<3	--	<3	<3	<3	<3	<3	<3	<3	--
MAY 1986												
30...	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
AUG												
14...	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
SEP 1989												
12...	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<1	<3

395451108301503 CA RETORT WELL RAM-7C

LOCATION.--Lat 39°54'51", long 108°30'15", in NW¼SW¼SE¼ sec. 33, T.1 S, R.99 W., Rio Blanco County, Hydrologic Unit 14050006.

AQUIFER.--Green River.

WELL CHARACTERISTICS.--Observation well, diameter 2 in., depth 679 ft., screened 659 to 669 ft.

PERIOD OF RECORD.--October 1984 to September 1989, (discontinued).

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 1984 25...	0950	6470	9.8	--	--	690	270	1.7	690
MAY 1985 13...	1350	6200	10.2	--	--	960	380	0.3	600
SEP 04...	1445	2540	9.1	22.5	--	710	240	24	230
MAY 1986 30...	1350	2930	10.2	25.0	--	810	320	1.5	220
AUG 14...	1350	1640	8.9	20.5	--	540	160	33	160
SEP 1989 12...	1530	2100	10.7	20.0	0	480	190	0.4	180

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	ALKA- LINITY WAT.DIS GRAN T. FIELD CACO3 (MG/L)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
OCT 1984 25...	12	790	62	--	3500	33	1.8	8.0	5350
MAY 1985 13...	9	790	46	--	3200	35	2.0	9.1	5060
SEP 04...	4	160	19	--	1400	15	2.5	19	2110
MAY 1986 30...	4	220	23	--	1500	16	2.1	11	2310
AUG 14...	3	95	27	--	910	16	3.6	22	1420
SEP 1989 12...	4	170	--	54	1100	22	3.3	13	1710

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 1984 25...	7.26	0.0	<0.01	<0.1	4.60	6.5	0.01	<0.01
MAY 1985 13...	6.87	0.0	<0.01	<0.1	5.90	6.5	0.01	<0.01
SEP 04...	2.86	0.0	<0.01	<0.1	0.61	0.90	<0.01	<0.01
MAY 1986 30...	3.14	0.0	<0.01	<0.1	1.30	1.1	0.02	<0.01
AUG 14...	1.93	0.0	<0.01	<0.1	0.33	0.50	<0.01	<0.01
SEP 1989 12...	2.31	0.0	<0.01	<0.1	1.50	1.2	0.01	0.02

QUALITY OF GROUND WATER

RIO BLANCO COUNTY

395451108301503 CA RETORT WELL RAM-7C--Continued

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT 1984 25...	0950	6	<100	2000	1	20	2	<1	70	<1
MAY 1985 13...	1350	2	500	2100	<1	10	<1	<1	60	<1
SEP 04...	1445	28	<100	830	<1	<10	1	<1	50	<1
MAY 1986 30...	1350	16	32	1000	<1	10	<1	<1	<3	<1
AUG 14...	1350	26	27	680	<1	<10	<1	2	16	<5
SEP 1989 12...	1530	16	<100	1100	<1	1	1	1	40	1

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT 1984 25...	1200	10	<0.1	840	8	<1	<1.0	10000	<10
MAY 1985 13...	1300	10	<0.1	500	12	<1	<1.0	6600	[illegible]
SEP 04...	360	50	<0.1	280	6	<1	<1.0	6100	30
MAY 1986 30...	370	2	<0.1	230	2	<1	<1.0	6500	3
AUG 14...	220	40	0.1	170	1	<1	1.0	4400	9
SEP 1989 12...	220	<10	0.1	160	[illegible]	<1	<1.0	4500	20

TOTAL RECOVERABLE CONCENTRATIONS OF SEMI-VOLATILE ORGANIC COMPOUNDS

DATE	TIME	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)
OCT 1984 25...	0950	<5	<5	<5	<5	<10	<10	<10	<10	<5	<5
MAY 1985 13...	1350	<5	<5	<5	<5	<10	<10	<10	<10	<5	<5
SEP 04...	1445	<5	<5	<5	<5	<10	<10	<10	<10	<5	<5
MAY 1986 30...	1350	<5	<5	<5	<10	<10	<10	<10	<10	<5	<5
AUG 14...	1350	<5	<5	<5	<10	<10	<10	<10	<10	<5	<5
SEP 1989 12...	1530	<5	<5	<5	<5	<10	<10	<10	<10	<5	<5

DATE	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	1,2,5,6 -DIBENZ -ANTHRA -CENE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)
OCT 1984 25...	<5	1	<5	<5	<30	<5	<5	<5	<10	<10	[illegible]
MAY 1985 13...	<5	<5	<5	<5	<30	<5	<5	<5	<10	<10	<5
SEP 04...	<5	<5	<5	<5	<30	<5	<5	<5	<10	<10	<5
MAY 1986 30...	<5	15	<5	<5	<5	<5	<6	<5	<10	<10	<5
AUG 14...	<5	<5	<5	<5	<5	<5	<6	<5	<10	<10	<5
SEP 1989 12...	<5	8	<5	<5	<30	<5	<5	<5	<10	<10	<5

RIO BLANCO COUNTY

395451108301503 CA RETORT WELL RAM-7C--Continued

TOTAL RECOVERABLE CONCENTRATIONS OF SEMI-VOLATILE ORGANIC COMPOUNDS

DATE	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)
OCT 1984 25...	<5	<5	<5	<5	9	<5	<10	<20	<30	<5	<5
MAY 1985 13...	<5	<5	<5	<5	12	<5	<5	<20	<30	<5	<5
SEP 04...	<5	<5	<5	<5	<5	<5	<5	<20	<30	<5	<5
MAY 1986 30...	<3	<3	<6	<5	9	<5	<5	<20	<30	<5	<5
AUG 14...	<3	<3	<6	<5	<6	<5	<5	<20	<30	<5	<5
SEP 1989 12...	<5	<5	<5	<5	24	<5	<5	<20	<30	<5	<5

DATE	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)
OCT 1984 25...	<10	<5	<5	<5	<5	<5	<5	<10	<5	1	<5
MAY 1985 13...	<10	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5
SEP 04...	<10	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5
MAY 1986 30...	<10	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5
AUG 14...	<10	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5
SEP 1989 12...	<10	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5

DATE	2-NITRO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)
OCT 1984 25...	<5	<30	<5	<5	<5	<30	<1	2	<5	<5	<20
MAY 1985 13...	<5	<30	<5	<5	<5	<30	<5	<5	<5	<5	<20
SEP 04...	<5	<30	<5	<5	<5	<30	<5	<5	<5	<5	<20
MAY 1986 30...	<6	<30	<5	<5	<5	<30	<5	<6	<5	<5	<5
AUG 14...	<6	<30	<5	<5	<5	<30	<5	<6	<5	<5	<5
SEP 1989 12...	<5	<30	<5	<5	<5	<30	<5	<5	<5	<5	<20

TOTAL RECOVERABLE CONCENTRATIONS OF INDUSTRIAL PURGEABLE ORGANIC COMPOUNDS

DATE	TIME	BENZENE TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)
OCT 1984 25...	0950	--	--	--	--	--	--	--	--	--	--	--
MAY 1985 13...	1350	--	--	--	--	--	--	--	--	--	--	--
SEP 04...	1445	20	<3	<3	<3	<3	<3	<3	--	<3	--	<3
MAY 1986 30...	1350	18	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
AUG 14...	1350	12	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
SEP 1989 12...	1530	13	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3

395451108301503 CA RETORT WELL RAM-7C--Continued

TOTAL RECOVERABLE CONCENTRATIONS OF INDUSTRIAL PURGEABLE ORGANIC COMPOUNDS

DATE	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPENE TOTAL (UG/L)
OCT 1984												
25...	1	<5	<5	--	--	--	--	--	--	--	1	--
MAY 1985												
13...	<5	<5	<5	--	--	--	--	--	--	--	<5	--
SEP												
04...	<5	<5	<5	<3	<3	<3	<3	<3	<3	--	<5	<3
MAY 1986												
30...	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<5	<3
AUG												
14...	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<5	<3
SEP 1989												
12...	<5	<5	<5	<3	<3	<3	<3	<3	<3	<3	<5	<3

DATE	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)
OCT 1984												
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 1985												
13...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
04...	<3	<3	<3	--	<3	<3	<3	<3	<3	<3	<3	--
MAY 1986												
30...	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
AUG												
14...	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
SEP 1989												
12...	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<1	<3

395451108301504 CA RETORT WELL RAM-7D

LOCATION.--Lat 39°54'51", long 108°30'15", in SW¼NW¼SE¼ sec. [illegible], T.1 S., R.99 W., Rio Blanco County, Hydrologic Unit 14050006.

AQUIFER.--Green River.

WELL CHARACTERISTICS.--Observation well, diameter [illegible] in., depth [illegible] ft., screened [illegible] to [illegible] ft.

PERIOD OF RECORD.--October 1984 to September 1989, (discontinued).

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT 1984									
25...	1030	4250	8.9	--	--	630	215	24	600
MAY 1985									
13...	1400	5820	9.1	--	--	710	265	11	580
SEP									
04...	1515	2540	9.1	24.0	--	703	253	17	340
MAY 1986									
30...	1400	2840	8.7	25.5	--	779	280	15	225
AUG									
14...	1400	1640	8.9	21.5	--	460	159	14	360
SEP 1989									
12...	1630	2050	8.4	20.0	3	445	155	14	183

RIO BLANCO COUNTY

395451108301504 CA RETORT WELL RAM-7G--Continued

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	ALKA-LINITY WAT.DIS GRAN T. FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT 1984									
25...	11	790	66	--	3200	36	3.0	14	4960
MAY 1985									
13...	11	790	34	--	2700	29	2.8	6.9	4480
SEP									
04...	4	180	22	--	1400	16	2.3	12	2150
MAY 1986									
30...	4	220	24	--	1500	15	3.2	11	2290
AUG									
14...	3	130	34	--	860	17	4.4	9.1	1370
SEP 1989									
12...	4	160	--	85	980	53	4.0	12	1570

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
OCT 1984								
25...	6.73	0.0	<0.01	<0.1	7.10	9.5	0.01	<0.01
MAY 1985								
13...	6.08	0.0	<0.01	<0.1	8.30	9.6	<0.01	<0.01
SEP								
04...	2.91	0.0	<0.01	<0.1	0.22	1.1	<0.01	<0.01
MAY 1986								
30...	3.10	0.0	0.01	<0.1	1.60	2.8	<0.01	<0.01
AUG								
14...	1.85	0.0	<0.01	<0.1	0.86	1.4	0.01	<0.01
SEP 1989								
12...	2.13	0.0	<0.01	<0.1	2.00	1.9	<0.01	<0.01

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT 1984										
25...	1000	<1	<100	2300	1	10	3	<1	90	<1
MAY 1985										
13...	1400	<1	400	2200	<1	10	<1	<1	60	3
SEP										
04...	1515	6	<100	810	<1	<10	1	1	50	1
MAY 1986										
30...	1400	<1	--	1200	<1	10	<1	6	40	2
AUG										
14...	1400	<1	41	780	<1	<10	<1	3	10	<5
SEP 1989										
12...	1630	1	<100	1100	<1	<1	1	<1	70	<1

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT 1984									
25...	1200	900	<0.1	55	11	<1	<1.0	9700	30
MAY 1985									
13...	1200	30	<0.1	6	37	<1	<1.0	6300	30
SEP									
04...	390	<10	<0.1	300	9	<1	<1.0	6600	50
MAY 1986									
30...	450	70	<0.1	18	5	<1	<1.0	6100	10
AUG									
14...	270	71	<0.1	100	3	<1	<1.0	3800	7
SEP 1989									
12...	240	40	<0.1	4	<1	<1	<1.0	5200	20

395451108301504 CA RETORT WELL RAM-7G--Continued

TOTAL RECOVERABLE CONCENTRATIONS OF SEMI-VOLATILE ORGANIC COMPOUNDS

DATE	TIME	ACE- NAPHTH- ENE TOTAL (UG/L)	ACE- NAPHTH- YLENE TOTAL (UG/L)	ANTHRA- CENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2- BENZANT HRACENE TOTAL (UG/L)	BENZO B FLUOR- AN- THENE TOTAL (UG/L)	BENZO K FLUOR- AN- THENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO- A- PYRENE TOTAL (UG/L)	BIS (2- CHLORO- ETHOXY) METHANE TOTAL (UG/L)	BIS 2- CHLORO- ETHYL ETHER TOTAL (UG/L)
OCT 1984 25...	1000	<5	<5	<5	<5	<10	<10	<10	<10	<5	<5
MAY 1985 13...	1400	<5	<5	<5	<5	<10	<10	<10	<10	<5	<5
SEP 04...	1515	<5	<5	<5	<5	<10	<10	<10	<10	<5	<5
MAY 1986 30...	1400	<5	<5	<5	<10	<10	<10	<10	<10	<5	<5
AUG 14...	1400	<5	<5	<5	<10	<10	<10	<10	<10	<5	<5
SEP 1989 12...	1630	<5	<5	<5	<5	<10	<10	<10	<10	<5	<5

DATE	BIS (2- CHLORO- ISO- PROPYL) ETHER TOTAL (UG/L)	BIS(2- ETHYL HEXYL) PHTHAL- ATE TOTAL (UG/L)	4- BROMO- PHENYL PHENYL ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL- ATE TOTAL (UG/L)	PARA- CHLORO- META CRESOL TOTAL (UG/L)	2- CHLORO- NAPH- THALENE TOTAL (UG/L)	2- CHLORO- PHENOL TOTAL (UG/L)	4- CHLORO- PHENYL PHENYL ETHER TOTAL (UG/L)	CHRY- SENE TOTAL (UG/L)	1,2,5,6 -DIBENZ -ANTHRA -CENE TOTAL (UG/L)	1,2-DI- CHLORO- BENZENE TOTAL (UG/L)
OCT 1984 25...	<15	<5	<5	<5	<30	<5	<5	<5	<10	<10	<5
MAY 1985 13...	<120	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5
SEP 04...	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5
MAY 1986 30...	<5	<5	<5	<5	<5	<5	<6	<5	<10	<10	<3
AUG 14...	<5	<5	<5	<5	<5	<5	<6	<5	<10	<10	<3
SEP 1989 12...	<5	<5	<5	<5	<30	<5	<5	<5	<10	<10	<5

DATE	1,3-DI- CHLORO- BENZENE TOTAL (UG/L)	1,4-DI- CHLORO- BENZENE TOTAL (UG/L)	2,4-DI- CHLORO- PHENOL TOTAL (UG/L)	DIETHYL PHTHAL- ATE TOTAL (UG/L)	2,4-DI- METHYL- PHENOL TOTAL (UG/L)	DI- METHYL PHTHAL- ATE TOTAL (UG/L)	DI-N- BUTYL PHTHAL- ATE TOTAL (UG/L)	2,4,- DI- NITRO- PHENOL TOTAL (UG/L)	4,6- DINITRO -ORTHO- CRESOL TOTAL (UG/L)	2,4-DI- NITRO- TOLUENE TOTAL (UG/L)	2,6-DI- NITRO- TOLUENE TOTAL (UG/L)
OCT 1984 25...	<5	<5	<5	<5	16	<5	<5	<20	<30	<5	<5
MAY 1985 13...	<5	<5	<5	<5	90	<5	<5	<20	<30	<5	<5
SEP 04...	<5	<5	<5	<5	46	<5	<5	<20	<30	<5	<5
MAY 1986 30...	<3	<3	<6	<5	<6	<5	<5	<20	<30	<5	<5
AUG 14...	<3	<3	<6	<5	<6	<5	<5	<20	<30	<5	<5
SEP 1989 12...	<5	<5	<5	<5	<5	<5	<5	<20	<30	<5	<5

DATE	DI-N- OCTYL PHTHAL- ATE TOTAL (UG/L)	FLUOR- ANTHENE TOTAL (UG/L)	FLUOR- ENE TOTAL (UG/L)	HEXA- CHLORO- BENZENE TOTAL (UG/L)	HEXA- CHLORO- BUT- ADIENE TOTAL (UG/L)	HEXA- CHLORO- CYCLO- PENT- ADIENE TOTAL (UG/L)	HEXA- CHLORO- ETHANE TOTAL (UG/L)	INDENO (1,2,3- CD) PYRENE TOTAL (UG/L)	ISO- PHORONE TOTAL (UG/L)	NAPHTH- ALENE TOTAL (UG/L)	NITRO- BENZENE TOTAL (UG/L)
OCT 1984 25...	<10	<5	<5	<5	<5	<5	<5	<10	<5	4	<5
MAY 1985 13...	<10	<5	<5	<5	<5	<5	<5	<10	<5	33	<5
SEP 04...	<10	<5	<5	<5	<5	<5	<5	<10	<5	20	<5
MAY 1986 30...	<10	<5	<5	<5	<5	<5	<5	<10	<5	22	<5
AUG 14...	<10	<5	<5	<5	<5	<5	<5	<10	<5	16	<5
SEP 1989 12...	<10	<5	<5	<5	<5	<5	<5	<10	<5	51	<5

395451108301504 CA RETORT WELL RAM-7G--Continued

TOTAL RECOVERABLE CONCENTRATIONS OF SEMI-VOLATILE ORGANIC COMPOUNDS

DATE	2-NITRO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)
OCT 1984											
25...	>5	<30	<5	<5	<5	<30	<5	<5	<5	<5	<20
MAY 1985											
13...	<5	<30	<5	<5	<5	<30	<5	<5	<5	<5	<20
SEP											
04...	<5	<30	<5	<5	<5	<30	<5	<5	<5	<5	<20
MAY 1986											
30...	<6	<30	<5	<5	<5	<30	<5	<6	<5	<5	<5
AUG											
14...	<6	<30	<5	<5	<5	<30	<5	<6	<5	<5	<5
SEP 1989											
12...	<5	<30	<5	<5	<5	<30	<5	<5	<5	<5	<20

TOTAL RECOVERABLE CONCENTRATIONS OF INDUSTRIAL PURGEABLE ORGANIC COMPOUNDS

DATE	TIME	BENZENE TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)
OCT 1984												
25...	1000	--	--	--	--	--	--	--	--	--	--	--
MAY 1985												
13...	1400	--	--	--	--	--	--	--	--	--	--	--
SEP												
04...	1515	56	<3	<3	<3	<3	<3	<3	--	<3	--	<3
MAY 1986												
30...	1400	63	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
AUG												
14...	1400	44	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
SEP 1989												
12...	1630	24	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3

DATE	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPENE TOTAL (UG/L)
OCT 1984												
25...	<5	<5	<5	--	--	--	--	--	--	--	4	--
MAY 1985												
13...	<5	<5	<5	--	--	--	--	--	--	--	33	--
SEP												
04...	<5	<5	<5	<3	<3	<3	<3	<3	<3	--	22	<3
MAY 1986												
30...	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	22	<3
AUG												
14...	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	16	<3
SEP 1989												
12...	<5	<5	<5	<3	<3	<3	<3	<3	<3	<3	57	<3

DATE	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)
OCT 1984												
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 1985												
13...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
04...	3.7	<3	<3	--	<3	<3	23	<3	<3	<3	<3	--
MAY 1986												
30...	10	<3	<3	<3	<3	<3	38	<3	<3	<3	<3	[illegible]
AUG												
14...	4.5	<3	<3	<3	<3	<3	14	<3	<3	<3	<3	[illegible]
SEP 1989												
12...	<8.1	<3	<3	<3	<3	<3	<3	<3	<3	<3	--	[illegible]

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FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI).

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	$2.54\text{x}10^{1}$	millimeters (mm)
	$2.54\text{x}10^{-2}$	meters (m)
feet (ft)	$3.048\text{x}10^{-1}$	meters (m)
miles (mi)	$1.609\text{x}10^{0}$	kilometers (km)
	Area	
acres	$4.047\text{x}10^{3}$	square meters (m^2)
	$4.047\text{x}10^{-1}$	square hectometers (hm^2)
	$4.047\text{x}10^{-3}$	square kilometers (km^2)
square miles (mi^2)	$2.590\text{x}10^{0}$	square kilometers (km^2)
	Volume	
gallons (gal)	$3.785\text{x}10^{0}$	liters (L)
	$3.785\text{x}10^{0}$	cubic decimeters (dm^3)
	$3.785\text{x}10^{-3}$	cubic meters (m^3)
million gallons	$3.785\text{x}10^{3}$	cubic meters (m^3)
	$3.785\text{x}10^{-3}$	cubic hectometers (hm^3)
cubic feet (ft^3)	$2.832\text{x}10^{1}$	cubic decimeters (dm^3)
	$2.832\text{x}10^{-2}$	cubic meters (m^3)
cfs-days	$2.447\text{x}10^{3}$	cubic meters (m^3)
	$2.447\text{x}10^{-3}$	cubic hectometers (hm^3)
acre-feet (acre-ft)	$1.233\text{x}10^{3}$	cubic meters (m^3)
	$1.233\text{x}10^{-3}$	cubic hectometers (hm^3)
	$1.233\text{x}10^{-6}$	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	$2.832\text{x}10^{1}$	liters per second (L/s)
	$2.832\text{x}10^{1}$	cubic decimeters per second (dm^3/s)
	$2.832\text{x}10^{-2}$	cubic meters per second (m^3/s)
gallons per minute (gal/min)	$6.309\text{x}10^{-2}$	liters per second (L/s)
	$6.309\text{x}10^{-2}$	cubic decimeters per second (dm^3/s)
	$6.309\text{x}10^{-5}$	cubic meters per second (m^3/s)
million gallons per day	$4.381\text{x}10^{1}$	cubic decimeters per second (dm^3/s)
	$4.381\text{x}10^{-2}$	cubic meters per second (m^3/s)
	Mass	
tons (short)	$9.072\text{x}10^{-1}$	megagrams (Mg) or metric tons

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